GLOBAL PHARMA & BIOTECH M&A REPORT - 2012

An IMAP Industry Report

IMAP

CHRISTOPH BIERI

Dear Reader,

This report is the annual review of M&A activity in the Global Pharma and Biotech industry, provided by IMAP's Healthcare team. Its intent is to provide you with the interpretations of events in the industry that we developed while advising clients in transactions around the globe. We believe that in times of great changes and uncertainty (as we are currently experiencing in the industry), insights based on hands-on experience are particularly helpful.

On page 3, you will find our analysis of deal activity in 2011. Last year brought a significant increase in transactions ranging from US$100 million to US$500 million, compared to 2010. Other observations are the continuing consolidation in China; very high valuations for R&D-driven transactions; and a strategic reshuffle in the future market for biosimilars, with some unexpected players appearing on the scene.

We examined one of the R&D-driven deals – Gilead's acquisition of Pharmasset – more closely, and find it to be an interesting case that shows how market dynamics, scientific achievements, and the need for strategic repositioning of the players in the field can overheat a bidding process, leading to stunning valuations (page 9).

On page 16, we discuss a comprehensive analysis of mid-term market growth that appeared last year. Our conclusions are slightly different than those of the of the study's authors, the IMS Healthcare institute (page 16). In our view, the data suggest that, in the next five years, the Pharma Market in mature economies will contract for the first time in history. This prospect increases the consolidation pressure, and also fuels the transformation of the industry. The automotive sector may show where this trend could lead, as McKinsey, the consultancy, suggested in a much-quoted article at the end of last year (see page 18).

There is consensus that future growth in the Pharma Industry will mainly come from emerging markets, most notably China; by introducing health insurance to 90 percent of the Chinese population, a market of more than 1 billion individuals was created within just two years. In our focus article, Pharma Industry Expert Yu Jingyi from IMAP in China outlines what foreign Pharma companies entering China will face.

The fundamental transformation of the industry obviously drives deal-making. IMAP is at the forefront in supporting clients in mid-market transactions around the globe: In 2011, the Healthcare Industry Team advised on more completed transactions with values up to US$200 million than any other adviser (and ranked second for completed transactions with values up to US$500 million), underlining our clients' continued trust in IMAP's capability to deliver superior advisory services.

We hope you find our analyses and reports stimulating and thought-provoking. We would be pleased if we could engage with you in an in-depth discussion about your views and perspectives. See page 21 to find your local IMAP Healthcare Expert to arrange a meeting, or visit www.imap.com to learn more.

Kind regards,

Christoph Bieri
IMAP
Switzerland

TABLE OF CONTENTS


IMAP
Hologic Inc.
Healthcare equipment
United States
Acquired selected assets of the business operations of
Microsulis Holdings Limited
Medical devices for gynecology field
United Kingdom
Advised the Seller
Sanare, LLC
Provides care management solutions
United States
Acquired 100% of the business operations of
Doctor Diabetic Supply, Inc.
Distributor of diabetic testing supplies
United States
Advised the Seller
Halma plc
Safety, health and sensor technology group
United Kingdom
Acquired 100% of
Medicel AG
Single-use Intra-Ocular lens injectors
Switzerland
Advised the Buyer
Utah Medical Products Inc
Supplier of femine health medical devices
United States
Acquired 100% of the business operations of
Femcare Group Ltd
Supplier of feminine health medical devices
United Kingdom
Advised the Seller
CONMED Corporation
surgical devices/equip. minimally invasive proced.
Utica, NY, United States
Mesculoskeletal Tissue Foundation
non-profit tissue bank
Edison, NJ, United States
JV Advisory - Sports Medicine
Joint Development and Distribution Agreement
BTG VivaSanté
Wound Care, OTC, Med. Devices manufacturer
Paris, France
Acquired Majority Control of Business Operati
LMFarma Ind e Com S/A
Advanced Wound Care Manufacturer
Sao José dos Campos, Sao Paulo, Brazil
Aventis Pharma Limited
Global Pharmaceutical Company
Mumbai, India
Acquired 100% of Nutraceutical Business
Universal Medicare Limited
India focussed Nutraceutical Company
Mumbai, India
Advised on Sale of Marketing and Distribution Business representing Nutraceutical Business
Simply Healthcare Plans, Inc.
Medicaid HMO
Coral Gables, Florida, United States
Jackson Memorial Hospital Health Pl
Medicaid HMO
Miami, Florida, United States
Advised on Sale of Company
Berner Osakeyhtiö
1883 formed Finnish family conglomerate
Helsinki, Finland
Acquired 100 % of Business Operations
Normomedical Oy
Importer and wholesaler of Omron healthcare product
Helsinki, Finland
Advised on Sale of Company
Stada Arzneimittel AG
Leading provider of OTC and generic drugs
Germany
acquired 100 % of the shares of
Spirig Healthcare AG
OTC & generic drugs unit of Spirig Pharma
Switzerland
IMAP Switzerland led the carve-out and M&A process for the vendors
Arseus NV/Fagron BV
Pharmaceuticals
Netherlands
Acquired majority control of the business operations of
Unit Dose Pack BV
Repackaging pharmaceuticals
Netherlands
Advised the Seller
Medort S.A.
Distribution of medical aids
Lodz, Poland
Acquired 100% of Business Operations
Rehab-Trade Kft.
Distribution of rehabilitation products
Budapest, Hungary
Advised on sale of the Company
Crucell Holland B.V.
develops products to combat infectious diseases
Leiden, Zuid, Netherlands
Biological Mimetics, Inc.
human and veterinary biologics development
Frederick, MD, United States
Undisclosed Buyer
Undisclosed
United States
Synta Pharmaceuticals Corp.
discovery, development of small molecule drug
Lexington, MA, United States
Represented the Seller
CryoLife Inc.
processing and distribution of implantable tissu
Kennesaw, GA, United States
ValveXchange Inc.
develops two-part bioprosthetic tissue valves
Aurora, CO, United States
Debt Raise
DCC plc
Sales, marketing and distribution group
Dublin, Ireland
Acquired 100 % of Business Operations
Business / assets of Neolab Limited
Generic pharmaceuticals supplier
United Kingdom
Advised on Sale of Company
Metropolitan Health Networks, Inc.
operates provider services network (PSN) in the Un
West Palm Beach, FL, United States
Continucare Corporation
primary care physician network and services
Miami, Florida, United States
Buyside M&A
Mid Europa Partners LLP
UK based private equity firm
London, United Kingdom
Acquired 65% of the Shares in
Kent Hospital
Hospital Management
Izmir, Turkey
Advised on Sale of the Company
Bausch & Lomb Inc
Global player in the eye care business
Rochester, NY, United States
Acquired 100% of Business Operations
Laboratorios Pförtner Cornealent S.
Leading contact lens manufacturer
Buenos Aires, Argentina
Advised on Sale of Company
Undisclosed
Undisclosed
United States
Equity Financing
NeoStem, Inc.
Engages in the development of cellular therapies
New York, United States
Advised on Equity Financing
Omega Pharma NV
Player in the global OTC market
Belgium
acquired 100% of the capital of
Terra Sante Group
BUO LP PRO brand
OTC products development and distribution
France
Advised the Seller
Dermapharm AG
Group of generic pharmaceutical companies
Germany
Acquired 95% of the shares of
Farmal d.d.
Generic pharmaceutical producer
Croatia
Advised the Seller
Erba Diagnostics Mannheim GmbH
Diagnosis testing equipment manufacturer
Germany
acquired 100% of
Diasis Diagnostics
Diagnosis testing equipment manufacturer
Turkey
Advised the Seller
DASA - Diagnósticos da América S.A.
Medical Diagnostics Company
Brazil
Acquired 100% of the business operations of
MD1 Diagnósticos
Medical Diagnostics Company
Brazil
Advised the Seller
Mehiläinen Oy
Private healthcare and social service company
Helsinki, Finland
Acquired 100 % of Business Operations
Felicitas-Klinikka Oy
A Private infertility treatment company
Helsinki, Finland
Advised on Sale of Company
Public Equity Offering
Private Placement
United States
ImmunoGen, Inc.
Develops targeted anticancer therapeutics
United States

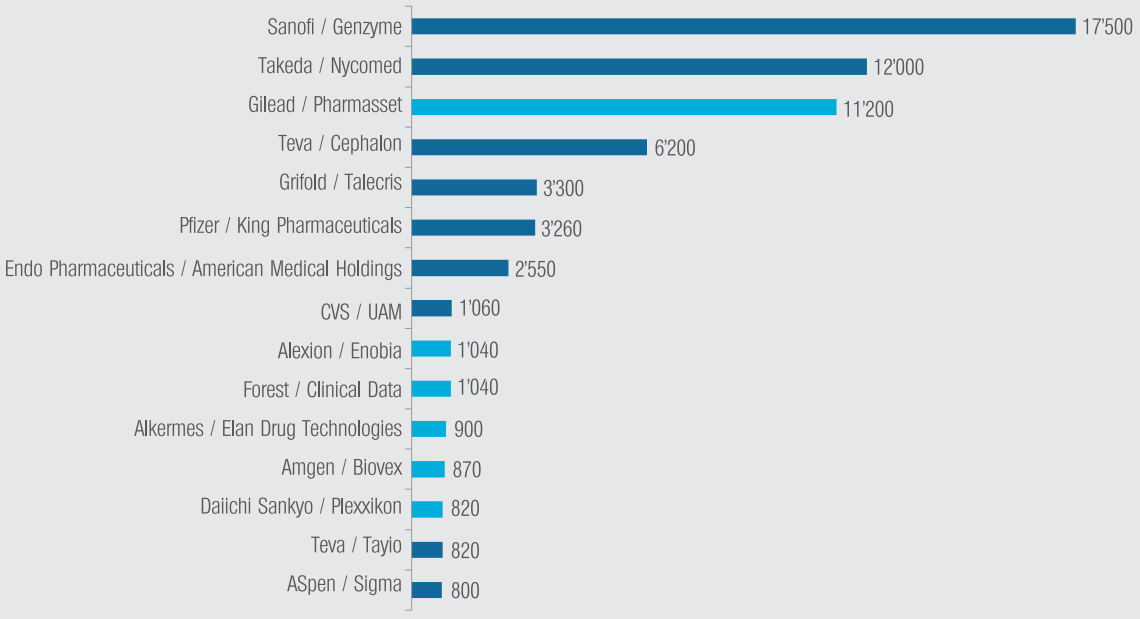
2011 - YEAR IN REVIEW

M&A activity higher than in weak 2010

M&A activity in 2011 picked up in comparison to 2010, which was a particularly weak year. We counted 504 deals that were announced or closed last year in the Pharma industry, with a total sum of disclosed transaction values of US$90 billion (2010: US$52 billion). In our analysis, there were significantly more transactions in the US$100 million to US$1 billion size range than in 2010 (81 compared to 31).

Of the 15 largest transactions – contributing approximately 70% to the sum of disclosed transaction values – six were R&D-driven, i.e., the target has few or no sales but owns promising research assets, such as a drug candidate (e.g., Pharmasset, acquired by Gilead; see our in-depth analysis below).

Top 15 transactions 2011 by transaction value (US$ million, fixed exchange rate)



Note: Announced or closed in 2011; 1 USD = 0.8 EUR

Majority of M&A activity in the West

The majority of acquisition targets were located in North America and Western Europe, where also the largest transactions took place. Most deals for which transaction values were disclosed are within and between the mature markets in Western Europe and North America. In contrast, deals involving Chinese targets were mostly domestic. We do not see a strong push of companies from mature countries into emerging markets– there were only a few acquisitions by global Big Pharma companies in Latin America, India or China.

The tables below show the number of transactions between the origin region of the acquirer (columns) vs. the location of the acquisition target (rows); the sum of all disclosed transaction values; and the number of transactions with disclosed transaction values.

Number of transactions by region of target and size								
	Location of acquisition target							
Size range*	North America	Western Europe	China	CEE	LatAm	India	Japan	Other
› US$1 bn	9	1						
US$100 m to $US1 bn	39	16	12	3	2	1	2	6
US$10 m to US$100 m	29	25	27	5	4	6	2	9
‹ US$10 m	17	11	40	2		5		10
n.a.	88	62	25	11	10	5	8	12
Total	182	115	104	21	16	17	12	37

Sum of total transaction values by acquirer and target region (number of transactions with disclosed transaction values) *								
	Location of acquiror							
Location of acquisition target	North America	Western Europe	China	CEE	LatAm	India	Japan	Other
North America	31,860 (148)	29,276 (21)	0 (1)		24 (1)	44 (2)	1,466 (7)	98
Western Europe	2,432 (33)	3,343 (72)	25 (1)	3 (2)		18 (3)	12,538 (4)	
China	91 (3)	114 (2)		3,516 (98)				112 (1)
CEE	341 (1)	334 (4)		133 (15)	0 (1)			
LatAm	215 (4)	129 (7)			135 (5)			
India	173 (5)	29 (3)				245 (9)		
Japan		960 (3)					60 (9)	
Other	824 (9)	204 (3)		0 (1)		36 (1)	117 (2)	1,280 (21)

**Transaction values in millions of USD. In brackets, number of transactions with disclosed transaction values.*

Moving to China

Much of the future global growth in the Pharma industry is expected from emerging markets where the health systems are rapidly developing, particularly in China. We would expect that the dramatic growth in China, which is expected to continue in the coming years, would cause Big Pharma companies to aggressively pursue acquisitions in China to establish a foothold. However, only few such acquisitions were announced or closed in 2011.

Not that the industry is sitting and waiting: the year 2011 saw additional announcements of a number of Pharma companies about initiatives to further to penetrate China's fast-growing market

Not that the industry is sitting and waiting: the year 2011 saw additional announcements of a number of Pharma companies about initiatives to further to penetrate China's fast-growing market.

Company	Action
Menarini	Acquired Singapore-based Invida, adding US$220 million revenues and 3,600 staff to its Asian footprint
Valeant	Acquired iNova, giving it access to the Asia Pacific market, for US$620 million
Lundtbeck	Set up an R&D center in Shanghai. Finding it difficult to hire skilled staff, most of the center's team will come from CROs who work with the firm
Merck & Co.	Announced a 51/49 Joint Venture with Chinese Pharma company Simcere to market products in China

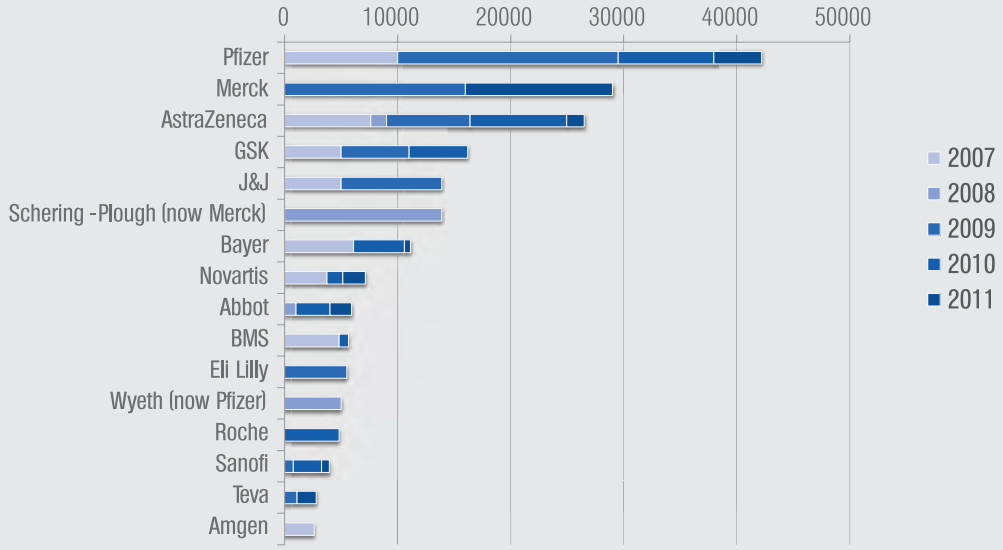
Headcount Reductions

On its way to a becoming a mature, slower-growing industry, Pharma clearly is in a consolidation mode. In 2011, there were again massive lay-offs, partially the results of mergers in the previous years (Pfizer, Merck); but to some extent, these lay-offs are also a prescient structural slimming - to be "lean and mean" for a tougher future. The top 10 lay-offs this year amounted to nearly 25,000, while Pfizer's announced layoffs in the last five years exceeded 40,000 staff.

Main reorganizations and reductions of headcounts announced in 2011

Company	When	How many	Why
Merck	Q3	12,000 - 13,000 excluding R&D	Realization of cost synergies after Shering Plough merger in 2009, and reducing costs by US$1,5 billion in anticipation of patent expiry of Singulair.
Pfizer	Q2	4,220: mainly R&D, but also commercial in US and Europe	Realigning research priorities, reducing costs in view of price pressure and patent expiries, realizing synergies of its 2009 acquisition of Wyeth.
Novartis	Q4	2000: mainly in Europe and US. R&D and manufacturing.	Saving US$200 million. Shifting facilities to Asia.
Abbot	Q1	1,900	Failure of a pipeline product.
AstraZeneca	Q4	1,550: sales and marketing in US.	Problems in the pipeline and upcoming patent losses, generic price pressure in general.
Teva	Q4	1,200 - 1,700 rumored, 200 confirmed	Plant closure in California, and realizing cost savings from Cepahlon merger in 2011.
Sanofi	Q1/4	At least 700:R&D and management	Reorganization program "Transforming", realization of Genzyme acquisition synergies.
Eisai	Q1	600 in the US, 200 in Europe, 100 in Japan	Cost reduction due to pipeline dearth and patent expiry
Bayer	Q2	540 in the US, manufacturing	Relocation of production of Betaseron. Bayer already had laid off 4,500 in 2010.

Head-count reductions by a selection of Big Pharma companies, 2007-2011



Source: Fiercepharma.com

Share buy-backs

The year 2011 also repeated the announcement of large share buy-back programs – which caused at least one analyst to draw a parallel between the Pharma and the tobacco industries. Apparently, the returns of investments in the business, particularly in R&D projects, are not satisfactory for some companies, and it is more advantageous to hand back profits to the shareholders.

Selected share-buy-back programs announced in 2011:	
Amgen	US$5 billion
Astra Zeneca	US$5 billion
Teva	US$3 billion
GSK	GBP 900 million
Biogen Idec	US$192 million

Abbot´s break-up – is it leading the way?

Novartis bought out Alcon in 2010 in a move to diversify its business further and secure additional growth. Last year, Abbot made headlines by moving the other way and splitting itself up. Citing "different investment profiles", the company decided to spin off its proprietary Pharma business from its diversified medical units comprising generic drugs, nutritionals, diagnostics and medical devices, and list it as a separate entity. The proprietary Pharma arm (total sales US$18 billion) is built around the monoclonal anti-TNF antibody Humira, with sales of US$8 billion in 2011, and expects growth from a "number of compounds with significant peak sales in excess of US$1 billion". Abbott's diversified medical products business, however, targets emerging markets for growth.

The deeper reason for Abbot's split may be that the original Pharma business has different financing needs and risk/profit profiles, and requires a corporate and leadership culture different from all other suppliers to the healthcare system. Following this line of reasoning, we should expect a wave of other corporate break-ups: not just of the big conglomerates with business areas outside the Pharma market, but also as companies will spin off businesses not directly linked to original drug development. Pfizer moved in this direction in 2011, announcing a sell-off of its animal health and nutritional businesses.

Perhaps in preparation for spin-offs, some Big Pharma companies are reorganizing internally to bundle their efforts regarding off-patent drugs. GSK's CEO wants to make the company less dependent on the "white pill from the west". GSK now generates 23% of revenues from these, down from 40% four years ago. The company disposed of a number of non-core OTC products in 2011 in the course of streamlining its business. Pfizer is building its own off-patent drug franchise as a new division under the Pfizer brand – "established products" as it is called.

"The deeper reason for Abbot's split may be that the original Pharma business has different financing needs and risk/profit profiles, and requires a corporate and leadership culture different from all other suppliers to the healthcare system."

Fight for the biosimilar market takes an unexpected turn

Many generic companies expected additional growth in the next years to come from biosimilars, copycat products of biotech drugs. The definition of the regulatory process for biosimilars has been lengthy and to some extent unpredictable, and the resulting uncertainty was generally considered a major roadblock for the development of the biosimilar market.
In 2011 the situation changed as more clarity regarding the regulatory process was established.

But as the regulatory path to biosimilars was cleared, the competitive landscape completely changed as new and unexpected alliances were built. Several originator biotech companies entered strategic alliances with new, sometimes unforeseen, partners to enter into the biosimilar field (see table below).

While the Fujifilm / Hanwha and Richter / Stada deals rather resemble a "normal" drug development licensing arrangement, the Amgen / Watson (not targeting Amgen's biotech drugs) and Biogen / Samsung (not targeting, of course, Biogen's biotech drugs) are clearly an unusual partnership.

It remains to be seen if these alliances will be successful. Lonza's JV with Teva, signed in 2009 with a similar intention as the alliances formed last year, should provide results soon. Clearly, the new partnerships profoundly change the race for the distribution of the biosimilar market. And the number of deals involving Biotech firms in this short time span also indicates the wariness of the Biotech originators towards generic competition.

Date	Partner 1	Partner 2	Deal value	Notes
Mar 2011	Samsung	Quintiles	US$300 m	10% Quintiles, 90% Samsung; JV
June 2011	Merck & Co.	Hanwha Chemical (SK)	Up to US$720 m	Acquisition of rights from Hanwha for biosimilar version of Enbrel, to be developed and commercialized by Merck.
Sept 2011	Gedeon Richter	STADA	Low one - digit	Cross-licensing arrangement relating to Rituximab and Trastuzumab
Nov 2011	Kyowa Hakko Kirin	Fujifilm	Not disclosed	Fujifilm acquired Merck&Co.'s BioManufacturing Network in March 2011
Dec 2011	Biogen	Samsung	US$300 m	85% by Samsung, 15% by Biogen. Portfolio not disclosed, but excludes Biogen's original drugs.
Dec 2011	Amgen	Watson	US$400 m	Watson to invest,development costs to be shared, products to be jointly branded. Portfolio not disclosed, but excludes Amgen's original drugs.
May 2009	Lonza	Teva	Not disclosed	Pro memoriam. First alliance to develop biosimilars, results expected soon.

Case study for an R&D deal: Gilead and Pharmasset

The year 2011 saw the profound rearrangement of the market for treatments against Hepatitis C Virus (HCV) infections. The actions and the rationale behind them offer a glimpse of how a small company, and a comparatively small set of data, can become the subject of a multi-billion dollar bet. It is a tale of good science in a "pre-heated" market, as well as an illustration of the dearth of good new products for Pharma companies to invest in.

The Disease

HCV is transmitted – like HIV – from blood to blood, through unprotected sexual intercourse, by sharing needles of drug addicts, in tattoo parlors by non-sterile devices, or through blood transfusions (before widespread screening became common).
The symptoms of HCV infections are in many cases mild (nausea, weight loss), and in fact only a fraction of infected persons are even diagnosed. In up to 50% of infected individuals, the infection cures spontaneously, without treatment. However, untreated, the infection can lead to liver cirrhosis, liver cancer and death: in the US, more people died of HCV infections than of HIV infections last year. Worldwide, 170 million to 180 million persons are estimated to be chronically infected with HCV; three to four million individuals are newly infected each year, and 350,000 die from its effects. In the US, 2-3% of the population (six to nine million) are chronically infected. The estimated costs for the treatment of HCV infections and its effects (including liver transplants) amount to US$6.7 billion in the US, where HCV-induced liver cirrhosis is the number one reason for liver transplantations.

Standard of Care

Pre-2011 drugs require a 48-week therapy of antivirals combined with interferons. These older drugs only cure some of the patients. The interferons which have to be co-administered with these drugs cause flu-like side effects, which lets patients to abandon the treatment. Until last year, there was – plainly speaking – no satisfactory treatment for the disease.

The Business Opportunity

HCV is a potentially lethal disease with a large patient population; it produces high costs to the general healthcare system, justifying high prices for a cure – a high medical need waiting for a drug offering an effective treatment.
The thinking in the community is that if new drugs were approved, and these could clear the HCV virus completely (leading to full recovery), a significant medical benefit would be created, which would justify high prices reimbursed by the payers (e.g. insurance companies). And if side effects could be limited, even patients with mild forms of the disease could be convinced to undergo the treatment, and the market could explode. Some analysts estimate that it could grow, in the major markets, to US$16 billion in 2015 from US$1.7 billion in 2010.

At The Beginning of 2011...

The year 2011 was generally expected to become a key year for the HCV market. In May 2011 the FDA approved two new drugs that work much better than the standard of care: Invilek by Vertex, partnered with J&J; and Victrelis by Merck. Both treatments still require co-administration of interferon but lead to much higher clearance rates in shorter treatment regimes. Vertex' Invilek consequently generated a whopping US$420 million in sales in its first full quarter on the market.

First Highlight – Competitors In Partnership

Soon after approval of its Victrelis, Merck entered an alliance with Roche for its commercialization. Each partner will use its own interferon (peginterferon alpha-2b, or PegIntron by Merck; peginterferferon-alpha2a, or Pegasys, by Roche) to promote Victralis in combination therapies. The deal includes further collaboration in development-stage products for the indication, of which Roche has three and Merck two. The arrangement is highly unusual as the two partners are head-to-head rivals in the virology market. The deal was heralded as a new mode of deal-making among Big Pharma contenders: it clearly shows the eagerness of these players to secure the HCV franchise, and to position themselves as the new standard of care.

Second Highlight – A True Scientific Advancement

But even before the Merck/Roche deal was signed, the mid-term prospects for the HCV market had already fundamentally changed. In March, development-stage company Pharmasset showed that its combo-pill PSI 7977 had cleared the virus in 15 of 16 patients, within only 12 weeks treatment and without co-administration of interferons. PSI 7977 seems to have the potential to become the standard of care as interferon-free, fast-acting and oral-only treatment against HCV.

Third Highlight – The Multibillion Dollar Deal

Although Pharmasset's pill will not come to market until at least 2014, and a proper Phase III study was only launched late in 2011, in December, Gilead acquired Pharmasset for a stunning US$11.2 billion – in a competitive process in which other HCV contenders such as Roche, BMS or Abbot may have participated. With this deal, Gilead, the market leader for HIV combination treatments, positions itself as future market leader in HCV – which may be transformational for the firm.

Is The Price Justified?

As elegant and promising as the science behind Pharmasset's drug candidate may be, the high price tag raises many questions. Pharmasset is an 80-staff development stage company with one program partnered (to Roche), and no product-related sales. PSI 7977 – the candidate product Gilead actually wanted – still can fail, and would not be the first candidate failing after interstellar phase II data. As far as can be judged from outside, the US$11.2 billion decision was based on a trial with just 16 patients. Even if successful, the business case may prove to be less attractive than anticipated. The market for HCV drugs is bound to grow driven by new treatments; but then also to shrink when the many chronically ill patients have been cured. Competing drugs by Roche, Merck, Abbot and others may seize a substantial part of the market targeted by Gilead. Not unexpectedly, 82% of the analysts queried by Reuters said Gilead clearly overpaid, and Gilead's share price dropped 9% following the announcement.

Focus Article

Riding the Tiger

Building China's pharmaceutical industry in fast forward

China's pharmaceutical industry is the most dynamic in the world. It grew 22% in 2010 to US$116 billion (including pharmaceutical, TCM and biopharmaceutical) , once again outperforming the global market, which grew at 4% - 5%.

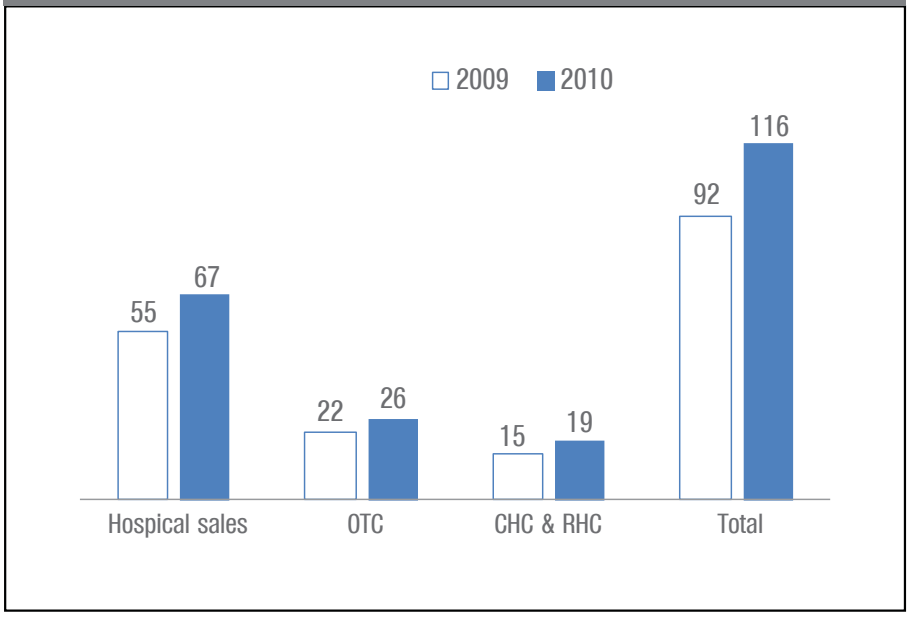
China's healthcare reforms were fully implemented in 2011; China's basic medical care system for urban and rural residents now covers more than 1.28 billion individuals, or more than 90% of its population. The market has created unprecedented opportunities for international companies, with growth rates of 45% for imported pharmaceutical products in the first six months of 2011. China's State Food and Drug Administration estimate that approximately half of the country's domestic pharmaceutical manufacturers are primarily engaged in chemical drug production. Another 25% are focused on traditional Chinese medicine, which is also becoming popular outside the country. In the previous 10 years, the compounded yearly growth rate of TCM (Traditional Chinese Medicine) was 17%, and in 2011, the TCM market is projected to increase another 33% to US$50 billion, accounting for 40% of the pharmaceutical market in China. We looked at two sectors in this market: prescription versus OTC, and innovative drugs versus generic drugs.

Prescription and OTC

Since 2009, the impact of healthcare reform has been demonstrated by the shifts in market share among the big hospitals, pharmacies, community healthcare centers (CHC) and rural healthcare centers (RHC). From 2007 to 2009, hospital sales grew by 27% per year, whereas OTC sales grew at only 7% per year. In 2010, while the overall growth rate for hospital sales slowed to 22%, OTC sales expanded dramatically. This was caused by the inclusion of OTC drugs on the reimbursement list under the new healthcare reform. This change will result in potential new sales to OTC pharmaceutical producers of at least US$30 billion over the next five years. As is the case for prescription drugs, high-end OTC drugs are dominated by imported products due to the perception that they are of higher quality. Healthcare reform in China aims to expand health insurance coverage to reach the entire population in both urban and rural areas. As part of this reform, The National Essential Drug List (NEDL) was introduced in 2009 to centralize drug purchasing for CHC and RHC in order to lower overall drug costs to the consumer. Implementation of the NEDL has resulted in the cost of listed drugs being reduced by 25%.

The pharmaceutical market in China grew 24% in 2011 to US$147 billion, and imported pharmaceuticals are expected to hold on to competitive advantages in pricing and drug bidding under current healthcare policy.

2009 - 2010 China Pharmaceutical Market



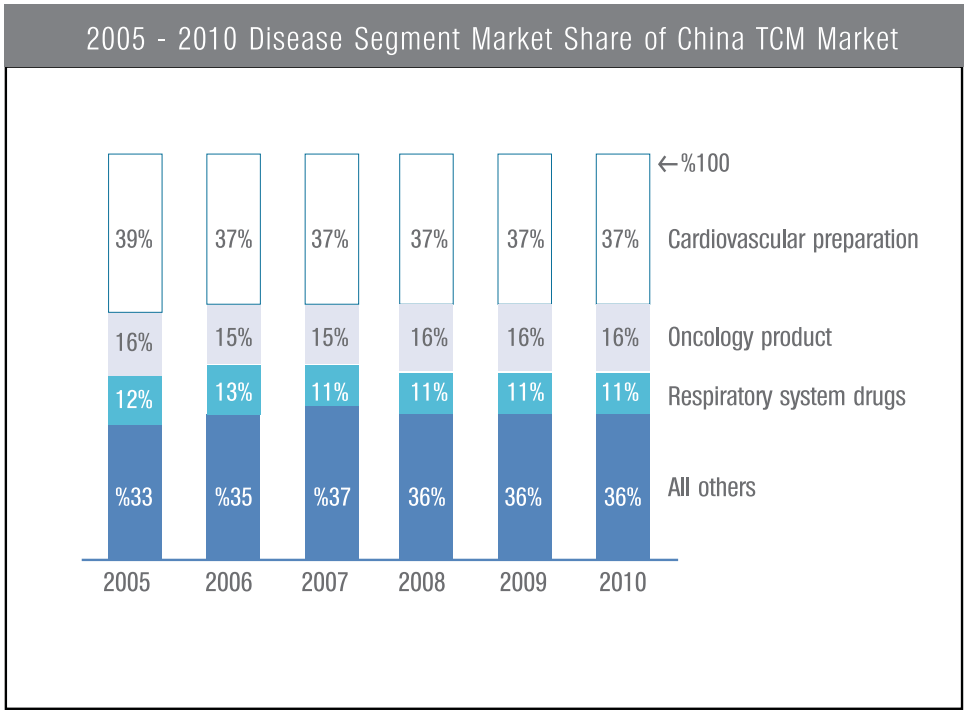
At the same time, the Chinese pharmaceutical market is still a hospital market. In 2010, approximately 70% of the drugs were sold through hospital in-house pharmacies, including RHC and CHC, because very few pharmacies are approved to be medical insurance designated pharmacies; and patients visited hospitals for both prescription and OTC drugs covered by insurance.

By the end of 2010, there were 27 websites approved to sell OTC products online. According to the SFDA regulation, a website should be independent of hospital, pharmaceutical company, or government agency to be eligible to apply for an online drug store license. However, there are thousands of online pharmacies that operate illegally, which will undoubtedly lead to even more regulation and control before this channel will become mature.

TCM contributes to 40% of the Chinese pharmaceutical market

By the end of September 2011, TCM sales in China had reached US$39 billion, with 33.4% growth from a year ago. Although the TCM market experienced explosive growth in the previous years, market share of different TCM product segments have been keeping stable. The big local pharmaceutical companies invested heavily to expand their TMC production capacity. By September 2011 the investment in TCM pre-manufacturing and TCM finished product manufacturing had increased 61.8% and 45.1% respectively, while the total investment in the pharmaceutical industry in China grew 8.5% to US$31.7 billion during the same time period. The continuous growth was driven by increasing health/wellness awareness, and many patients choose self-treatment when they cannot easily reach the healthcare providers.

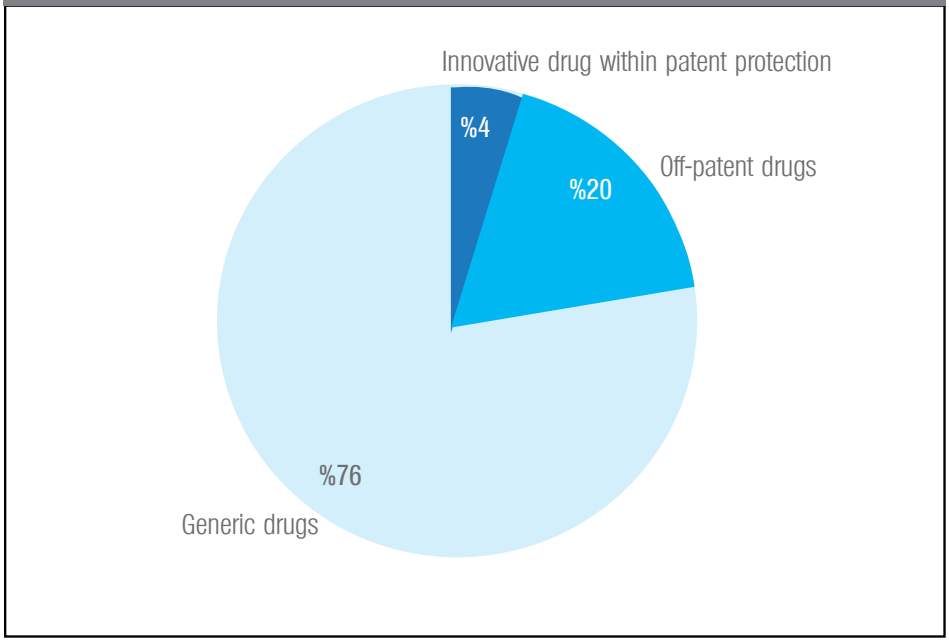
People in China have a greater acceptance of plant drugs due to the long-held belief that western drugs produce only a temporary release of symptoms, but that TCM is the fundamental solution for diseases, particularly the chronic diseases. Many TCM formulas have been used for self-treatment in China for hundreds of years, and these drugs are available at pharmacies as OTC to the consumers.



Innovative and Generic

According to the China Association of Medical Economics, 97% of the drugs produced locally are generics. Very few local producers have innovative drugs in their pipelines. The innovative drug market, which grew 35.7% in 2010 , is dominated by imported products, particularly those produced by MNCs (Multi-National Companies). Generic drugs have over 70% of the entire pharmaceutical market in China, while less than 5% of the market comprises innovative drugs still under patent protection. The remaining 20% of the market consists of off-patent drugs: this market is critical for MNCs to survive in China.

Innovative and generic drug market share in China 2010



Innovative drugs experienced steady growth, though market share remained small

China's pharmaceuticals market continued growing; however, many US and European MNCs are experiencing difficulty establishing market dominance in China. Although half of the top 10 pharmaceutical companies in China are multinationals, none possess more than 2.5% of the total market share . This is due to high fragmentation of the Chinese market, as well as the preference of hospitals in lower-tier cities and rural areas for cheaper generic drugs; on the other hand, MNC pharmaceutical companies would not enter the grassroots market without sacrificing the drug price. Because of this, many MNCs are contemplating a change of strategy that is expected to result in substantial staff reductions in 2012 and 2013.

Since 2006, many pharmaceutical MNCs have restructured their China businesses by establishing specialized sales teams for each business unit. MNCs believed such a structure would increase sales and profits; however, they have since discovered that adding staff does not automatically translate into increased sales. Instead, this increased focus on short-term performance, along with high staff turnover, was found to damage corporate culture and raise training and recruiting costs. Over the same period, the output of each medical representative declined, and productivity also dropped off, leading to huge overhead costs. Many MNCs are now preparing to abandon this structure, due to its high cost and its potential effects on profits.

In recent years, several MNCs began expanding their product portfolio to include generic drugs in China. Due to the loss or expiration of patent protection for best-selling products, MNCs have switched to high-end generic products to maintain rapid growth in China. Pfizer entered an agreement in June 2011 to set up a joint venture with a local API and generic maker, Hisun Pharmaceutical, to co-develop and commercialize the off-patent drugs as well as high-end generics. AstraZeneca acquired Guangdong BeiKang Pharmaceutical Company, a generic antibiotics maker, in December 2011 to reinforce its commitment to bring more high-end generics to patients in China.

Unprecedented demand for high-end generics

The healthcare reform has created extraordinary opportunities for both imported and domestically-produced high-end generics. Although China's State Council prepared RMB 860 billion (approximately US$125 billion) of incremental spending from 2009 to 2011 for the reform, the per capita spending remains low when the huge population base is considered. Therefore, the Chinese government implemented "cost-cutting measures" to substantially improve both healthcare quality and health insurance coverage. The "cost-cutting measure" favors value-added high-end generics ("cheaper price, better quality"), as it aims for balancing delivery quality with affordability for the masses.

It is estimated that by 2020, approximately 140 million people (about 11% of the population) will be over 65 years old in China; improved nutrition and diet conditions have also generated higher total cholesterol levels and blood pressure levels. The aging and sick population creates a huge demand for high quality healthcare services and pharmaceutical products.

Diseases	2010 Incidence (1/1000)	Number of patients (million)
Acute Upper Respiratory Infection	38	50
High Blood Pressure	31.4	42
Acute Gastritis	13.6	18
Cardiac Disease	10.7	11
Diabetes	6	8

In addition, doctors and patients also need more choices with regard to high-quality products. Previously, the market consisted of expensive innovative drugs and low priced low-end generics. Doctors and patients have long been concerned by safety and efficacy issues arising from the use of poor quality generics; at the same time, expensive innovative drugs are not affordable for the majority. The cost effectiveness of high-end generics is advocated by doctors and patients; thus distributors and local manufacturers are actively looking for the opportunity to form strategic alliances with international high-end generic producers.

NDRC sets upper limits for the retail prices of the drugs in the reimbursement list. Innovative drugs are graded at the highest price. When the drugs go off-patent, the drug price will be lowered; however, the off-patent drugs are still more expensive than generics. To encourage the development of high-end generics, NDRC allows the high-end generics makers to apply for "separate pricing" (priced higher than all other generics) if the products are proven to have an advantage in production process, ingredient quality, drug standards and quality, or efficacy and safety. Both locally-produced generics and imported generics can apply for "separate pricing". Although not every imported generic can be priced higher, the imported generics approved with "separate pricing" can command higher prices than local high-end generics, when the importer provides the price in both the country where the drug is produced and in other Asian countries.

The global generic producers implemented a series of strategies to penetrate the Chinese market. Sandoz is among the earliest international generic producers to enter China's market. It had the first product approved in China in 2001, and the first API approved in 2004. Sandoz set up its China headquarters and built its first factory in 2007; later it started to in-license products from HuaXia pharmaceutical, a local generics maker. In 2010, Sandoz's flexible strategy enabled it to achieve sales of US$414 million in China.

Producer	Highest retail price by NDRC (RMB)	Seperate pricing
Sandoz	￥10.40	Y
North China Pharmaceutical Group	￥ 7.10	Y
All other producers	￥ 3.30	N

What to be expected:
We anticipate growth of another 25% in China's healthcare industry in 2012, and healthcare reforms will continue to drive the development of the pharmaceutical market. Given the huge base and rapid growth of China's healthcare market, it is quickly becoming the most dynamic in the world. Although China's market is still difficult to penetrate, early entry is the best strategy to gain market share and competitive advantages.

IMAP in China (also known as InterChina Consulting) is a strategy and M&A Advisory firm, founded in 1994. Over the last years, IMAP has become one of the leading corporate advisors in the country. Currently the firm, with two offices in China (Beijing and Shanghai), employs more than 60 specialized advisors, and has successfully closed more than 160 transactions (representing more than €6 billion in overall deal value).

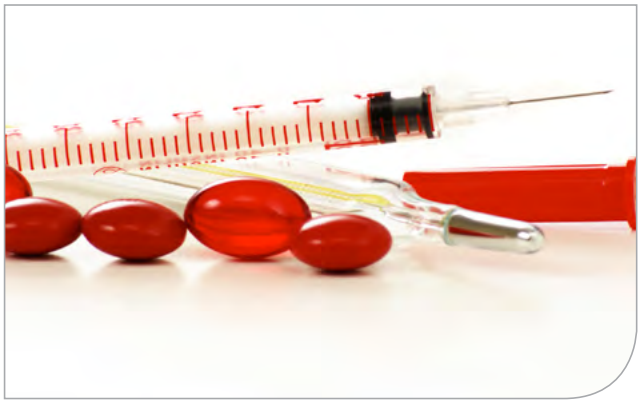
IMAP's business model has been adapted to the specific requirements of the Chinese market; a market that requires both a carefully drafted strategy and a flexible corporate execution capacity. IMAP´s M&A Advisory Practice offers buy side, sell side, capital raising, strategic alliance and foreign invested control advisory services.

IMAP has developed focused expertise in select sectors, including (but not limited to) automotive, machinery & industrial applications, chemicals, energy, consumer & retail goods, and healthcare. Its healthcare sector group accounts for approximately 20% of the firm's project volume, and features a team of specialists with backgrounds in medical device, hospital, and pharmaceuticals industry. IMAP advises international drug makers and medical device companies regarding market entry / expansion strategies, assists foreign companies in acquisitions of Chinese companies, and helps Chinese companies to realize their internationalization strategies.

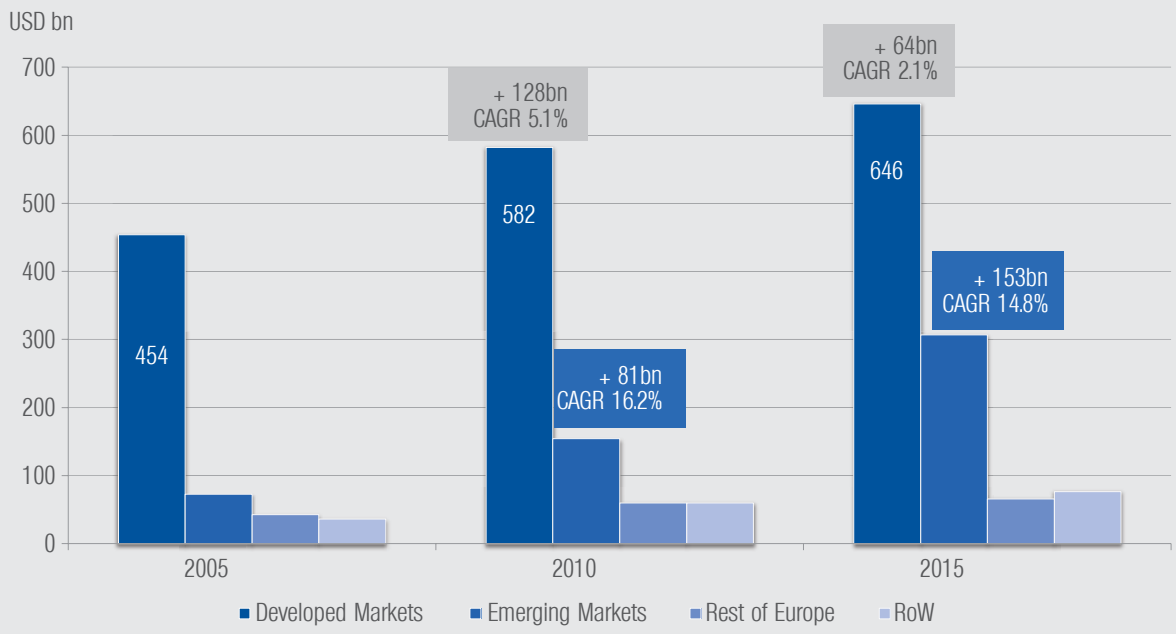
Dire Straits Ahead?

Growth only from emerging markets

Optimists rule the world, they say, and optimism is what Pharma executives need when looking at some of the fundamentals for the future, provided by the IMS Institute on Healthcare Informatics in their April 2011 report. Pharmaceutical sales (at ex-factory levels) are expected to grow only at 2.1% CAGR 2010-2015 in the mature markets, compared to 5.1% in the previous five years (see below). The doubling of sales in emerging countries (China, Brazil, India, Russia, and 13 others) in the same period holds great promise – but more than half of the US$153 billion market growth in that region is supposed to come from China, where Big Pharma is not yet fully anchored and profits are slim.

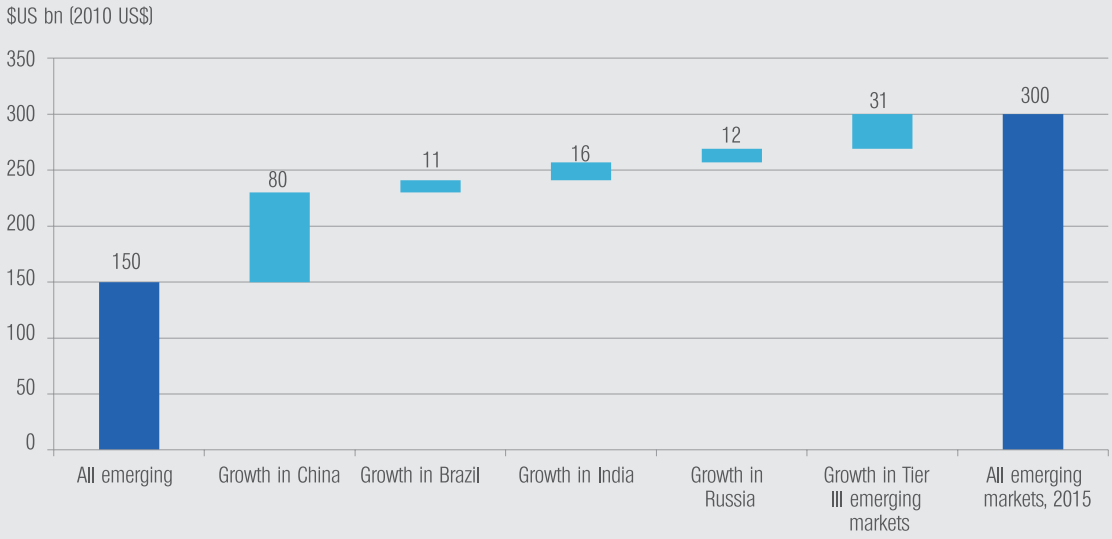


Will emerging markets save the global Pharma industry?



Developed markets: USA, Japan, Germany, France, Italy, Spain, Canada, UK and South Korea
Source: IMS Institute on Healthcare Informatics, "The Global Use of Medicines: Outlook through 2015", April 2011

Among emerging markets, China is a class of its own



Tier III emerging markets, in descending order of size: Mexico, Turkey, Poland, Venezuela, Argentina, Indonesia, South Africa, Thailand, Romania, Egypt, Ukraine, Pakistan and Vietnam

Source: IMS Institute on Healthcare Informatics, "The Global Use of Medicines: Outlook through 2015", April 2011

In mature market, all hope on new drugs

In the mature markets, even the meager growth predicted is far from secure. US$119 billion revenues of originals are projected to be wiped off due to loss of exclusivity (LoE) - a stunning 18% of the total Pharma sales in mature markets. IMS expects that these losses can – over the whole industry – be compensated by new original drugs, to be launched between 2010 and 2013, which are supposed to contribute US$120 billion in new sales.

Continuing cost-saving pressures by payers around the globe may limit the sales of new products - or even prevent them coming to the market at all. Health-Technology Assessments used to determine whether a drug's benefits are worth the money have already caused some companies to pull products off the market (Tekamlo by Novartis in Germany), or delay its development (Tradjenta by Eli Lilly/Boehringer Ingelheim).

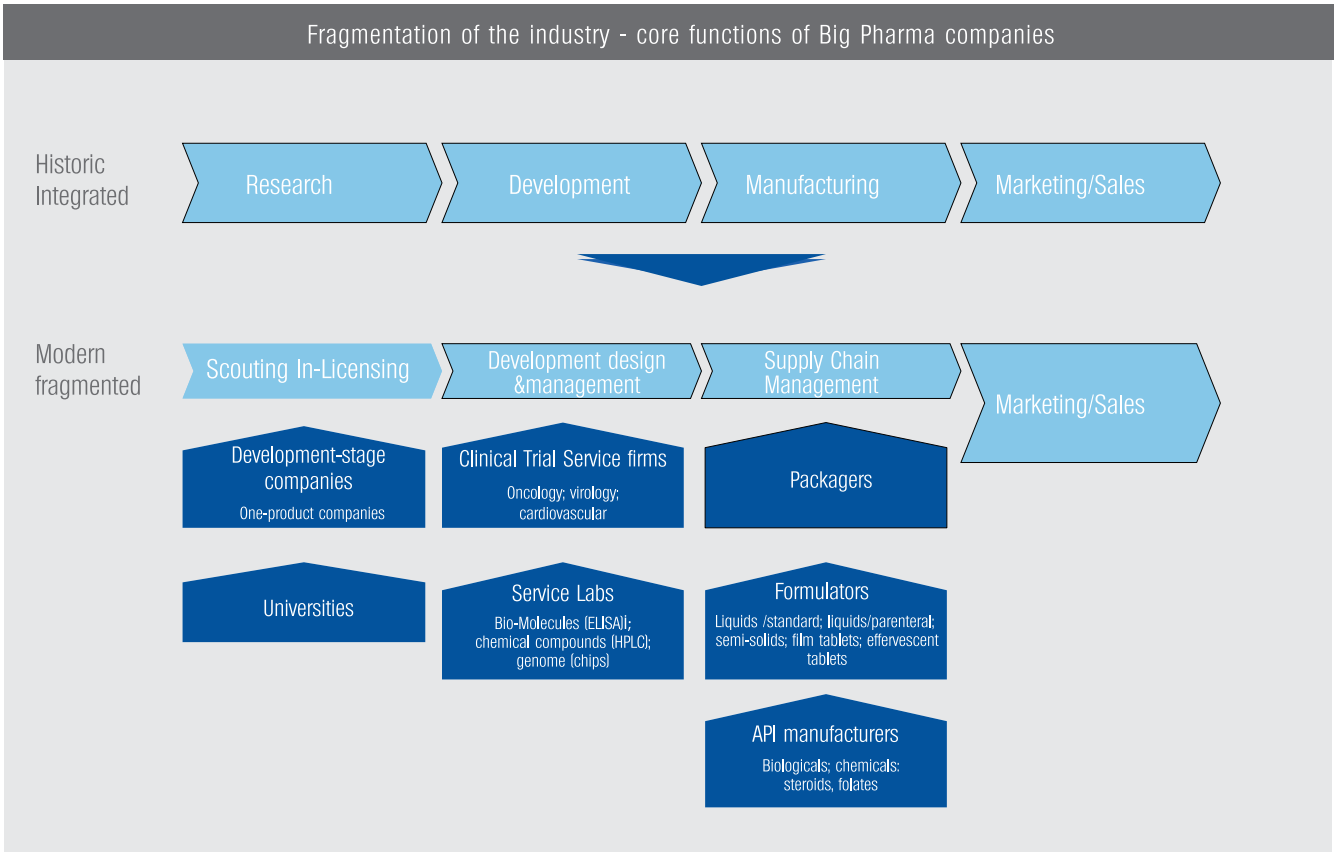
These new policies, within the context of the continuing fiscal crises around the globe, will probably lead to a re-evaluation, and potentially abandonment, of some candidate products. This may cause the Pharma market in mature countries to even shrink.

Restructuring the value chain – "going automotive"?

McKinsey, the consultancy, published a much-cited article in December in which the authors suggest that the Pharmaceutical industry will undergo a structural change that leads it to resemble the automotive industry – a few large brands supported by a myriad of small, highly specialized service providers and manufacturers.

While Big Pharma companies still perform many – if not most – tasks related to the core business in-house, there is a continuous trend to outsourcing and fragmentation. Examples include Pfizer's decision to outsource clinical trial program initiation and management, data management, study logistics and communications, to two CROs, ICON and Parexel; Sanofi's US$2.2 billion alliance with Covance; or Takeda's strategy to completely outsource all R&D to, again, Covance as preferred partner.

While these big outsourcing deals make the headlines, the overall trend is one towards more small, specialized service providers and manufacturers feeding Big Pharma's value chain. The core functions of the Big Pharma companies have shifted to managing, coordinating and financing, as shown in the graph below:



Global M&A Outlook

Deal Drivers

Where do we expect deals in the next years? Basically, we see four drivers for dealmaking: cost synergies; access to innovation and candidate products; access to new geographic markets; and break-ups and spin-offs to improve the investment story.

Where do we expect deals in the next years? Basically, we see four drivers for dealmaking: cost synergies; access to innovation and candidate products; access to new geographic markets; and break-ups and spin-offs to improve the investment story.

Cost synergies

We believe that, in the shorter term, research-driven Pharma companies must further consolidate. The dependency of some players, even large firms, on single originals is not sustainable. And there is simply not enough good innovation to keep all the originators in place. Hence we expect that in the mid-term, far fewer large players will launch new products– which are developed mainly together with smaller, innovative firms. The bulk of the market, however, in terms of volume will be large, integrated health companies with a global footprint, strong brands and lean cost structures.

We assume that as soon as the stock markets recover and supply of debt to fund large transactions resumes, a number of large mergers involving mid-sized Pharma companies (revenues between US$5-20 billion) will take place.

R&D Deals

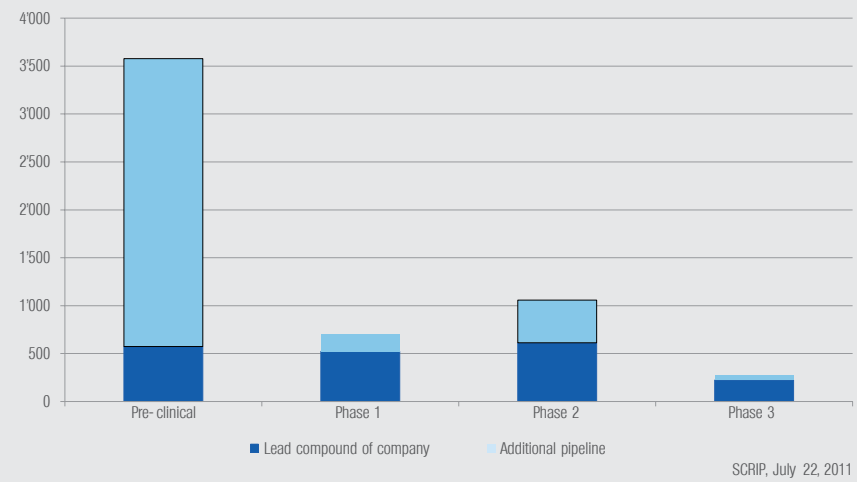
In-licensing and acquisitions will obviously continue to be the prime route for Big Pharma to fill their pipelines with drug candidates. The ponds in which to fish are the candidate drugs owned by development-stage Pharma companies (companies with research programs but no or only little product-related sales). In June, SCRIP counted about 5,600 programs owned by development-stage Pharma companies. However, the potential of a candidate drug typically can only be assessed following the first data of phase II studies. And development-stage biopharma companies tend to focus all resources on the most advanced ("lead") candidates, treating the others as "stepchildren" that are merely dragged along.

Hence the pool of really interesting projects (lead products in phase II or beyond) is much smaller, perhaps 850; and most of them, one would assume, are already licensed out to a Big Pharma partner. Good new drug candidates are extremely difficult to find, or, as a Pharma executive put it: "There can't be a good Phase II product which is not yet partnered – if it is not partnered it is not good."

Our expectation for the near future:

We believe that mid-stage drug candidates will remain very much in demand, with very high valuations paid in licensing or M&A deals. However, targets will have to face extreme scrutiny of their scientific and pharmaeconomic merits, and must hit the right timing.

Drug development projects performed by companies without product-related sales



SCRIP, July 22, 2011

Access to new geographic markets

Through observation and our own case work we know that Pharma companies are aggressively pursuing acquisition strategies in emerging markets. However, the issue is that opportunities are scarce – everybody is going there – and valuations are high. One way to get around this challenge is to acquire Western Pharma companies that have established a foothold in emerging markets, as did Takeda with Nycomed, or Valeant with PharmaSwiss.

Our expectations for the near future:

China: Most large Chinese Pharma companies are still state-owned. The Chinese government appars to cause the domestic Pharma companies to merge before Big Pharma starts acquisitions. We expect inbound M&A activity to remain at low levels, both in number and size of deals.

India: In the past years, Big Pharma companies have acquired or partnered with the top-ranked Indian players for access to this fast-growing market. In 2011, fearing drug price increases due to lower generic competition, the Indian Government contemplated restricting acquisitions of domestic generic drug manufacturers; however the regulations were not enacted. With the Indian Pharma market growing rapidly and consistently, and no restrictions for FDI in place, we expect in the mid-term future a number of cross-border deals."

Latin America: We expect continuous consolidation within the region, driven by higher regulatory standards and the professionalization of drug approval processes, along with more stringent enforcement of patent laws. In Brazil, Mexico and Colombia, the Big Pharma companies are generally under-represented, hence more inbound M&A activity is to be expected.

"In China, we expect inbound M&A activity to remain at low levels, both in number and size of deals."

"With the Indian Pharma market growing rapidly and consistently, and no restrictions for FDI in place, we expect in the mid-term future a number of cross-border deals"

"In Brazil, Mexico and Colombia, the Big Pharma companies are generally under-represented, hence more inbound M&A activity is to be expected."

Improving the investment story

Compared to other industries, Pharma companies still have room to optimize their capital and cost structure. To address the effects of market contractions and pressure on margins, Pharma companies will be forced to focus on core competences and assets of strategic importance.

Our expectations for the near future:

In the mid-term, we expect more break-ups like Abbot's. For all Pharma companies, we expect more spin-offs/ outsourcing of non-essential functions to service providers, as well as optimization of production asset bases.

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