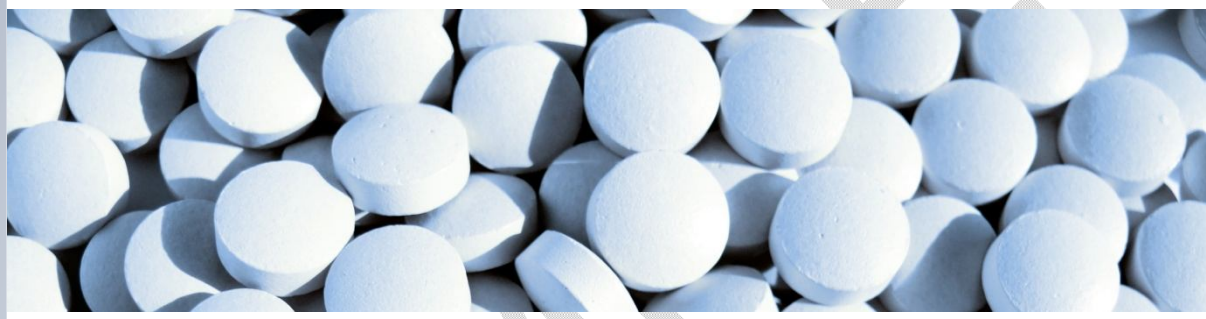
Generic Growth Strategies

Market Driven by Impending Patent Cliff, Declining R&D Productivity and Government Initiatives to Reduce Healthcare Costs



GBI Research
Global Business Intelligence

GBI Research Report Guidance

- Chapter three gives an overview of the generic pharmaceutical market. It includes a list of leading generic pharmaceutical companies, the generic market share of select countries, and drivers and restraints of the generic pharmaceutical market.
- Chapter four describes the regulatory landscape of the generic drugs industry in the US, major European countries such as the UK, Germany, France, Italy and Spain, and Japan. This section details the current and upcoming regulations that are expected to have an impact on the growth of the generics market.
- Chapter five gives details of the major growth strategies adopted in the generics drugs industry. Case studies accompany the strategies to show their real market impact.
- Chapter six is focused on competitive profiling. This section includes detailed profiles of the top companies operating in the generics market, along with their generic growth strategies.

Executive Summary

Leading Generic Companies Resort to Multiple Strategies for Growth

Most of the leading generic giants such as Teva, Sandoz, Mylan and Watson use multiple options to ensure a high market share and future growth. The strategies used include applying for generic approvals with the Food and Drug Administration (FDA) and European Medicines Agency (EMA), Mergers and Acquisitions (M&As), developing a strong and innovative generic drug pipeline, improving infrastructure to enhance manufacturing and Research and Development (R&D) capabilities, new product launches, and geographic expansion.

Generic and innovative pharmaceutical companies are exploring all of the ways available to increase their presence in the generic pharmaceutical market, given the current scenario where governments are encouraging the increased use of generics to bring down healthcare costs. For instance, Hospira is reaching out to cover new geographies in order to develop their presence in generics across the world, and also increasing their product coverage by offering generics that are available in the market but not included in their product portfolio.

The advantage of being the first to launch a generic in the market has been capitalized on by companies such as Hospira, by challenging the intellectual property of proprietary pharmaceutical companies. The strategy has resulted in generating generic blockbusters, such as in the case of Sandoz's generic enoxaparin.

With the regulatory landscape in biosimilars taking shape, many pharmaceutical companies are developing biosimilars of potential reference biologics that are soon going off-patent.

Difficult-to-Reproduce Generics Being Developed to Beat Competition

Some of the generic companies are focusing on a new trend by offering generics that have high barriers to entry and are as a result available at higher prices. These are called super generics, and are developed as value-added reformulations of off-patent drugs that require New Drug Application (NDA) submissions. Super generics offer a means of differentiation in the industry. For the development of super generics, these companies have to invest in R&D to launch reformulated versions of off-patent drugs, or apply a complex manufacturing process. Significant potential for super generics lies in specific therapeutic areas. Super generics producers focus on areas of unmet medical needs that are not satisfied by the current therapies, in high sales potential areas such as Central Nervous System (CNS) and cancer. Areas where innovators have already patented extensively and developed several line extensions in easy-to-formulate markets, such as cardiovascular drugs, have less attractiveness to super generics manufacturers.

There are several types of reformulation strategy that are adopted to make super generics out of off-patent drugs, such as new dose forms (injection to oral forms, extended release), new combinations and new salts. For instance, Dr. Reddy's Laboratories (DRL) sells fondaparinux, which is the generic version of GlaxoSmithKline's (GSK) Arixtra, in the US. Alchemia develops the product with the help of a novel, cost-effective synthesis for the manufacture of fondaparinux at commercial scale. The process is patent protected until 2021 (fondaparinux product website, 2012). There is no risk of raw material contamination with fondaparinux since it is a purely synthetic compound. Generic fondaparinux has a superior efficacy and safety profile when compared to other heparin drugs. The bulk manufacturer, DRL, produces fondaparinux at a reasonably competitive price in the US market.

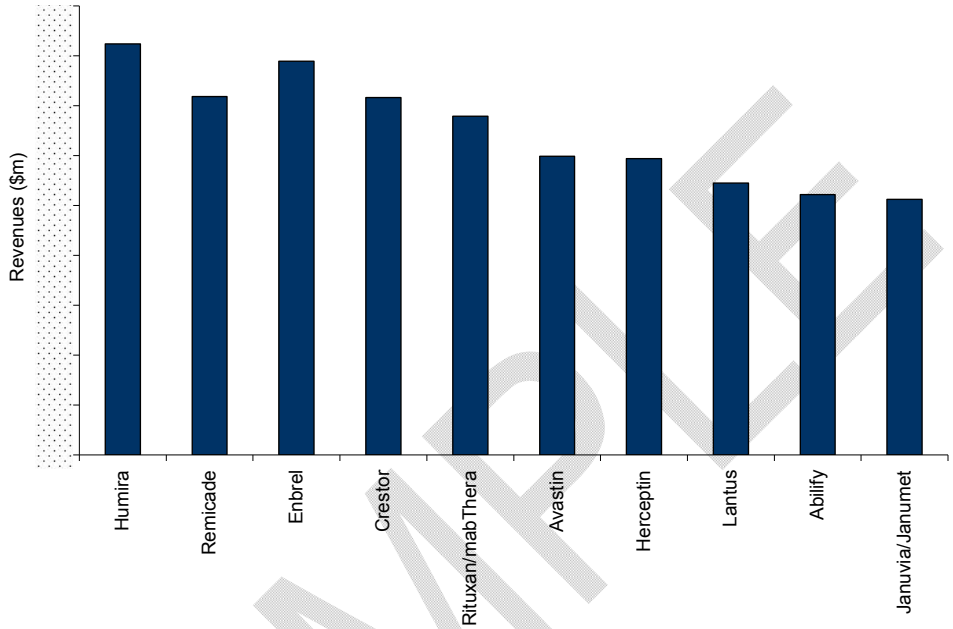
By 2015, branded products with sales of up to $XX billion will go off-patent, giving generic pharmaceutical companies immense opportunities to capitalize on the market

Opportunities Worth More than $XX billion in Generics and Biosimilars

The looming drug patent expiration loss the industry is presently facing is unprecedented, in terms of both the number of drugs and the magnitude of the total hit. However, this same situation presents a huge opportunity for the generic drug makers.

The figure below is an illustration of the global revenues of the top 10 drugs that are set to lose their patent protection between 2013 and 2020.

Generic Growth Strategies, Global, Revenues of the Top 10 Drugs Due for Patent Expiry ($m), 2013-2020



Source: GBI Research; GBI Research's Proprietary Products Database [accessed on: September 20, 2012]

Note: The patent of blockbuster drug Enbrel has been extended to 2028

The pharmaceutical industry will experience major patent expiries during 2013-2020, of which 2014 to 2017 are expected to be peak years, with the loss of patents for drugs whose sales were worth more than $XX billion during 2011. By 2015, branded products with sales of up to $XX billion will go off-patent, giving generic pharmaceutical companies immense opportunities to capitalize on the market (Teva, 2011). Along with generic drugs, pharmaceutical companies will also have the opportunity to develop biosimilars, as biologics with 2011 sales of approximately $XX billion will go off-patent over the next five years (Novartis, 2012).

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1.1 List of Tables

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2 Generic Growth Strategies - Introduction

Generic drugs have the same active ingredient as their corresponding innovative drugs, and are therefore an equivalent but cheaper therapeutic option compared to innovative drugs, due to less cost and time being required in their development process.

Generic drugs need to meet similar governmental regulatory requirements as those for innovative drugs, and should be approved by regulatory authorities to be sold in particular countries. The demand for generic drugs is growing continuously due to the need to control rising healthcare expenditure, particularly with regard to the increasing elderly population.

In the US, generic drugs can cost up to XX% less than branded drugs (Federal Trade Commission, 2010). Generics bring relief to payers by lowering healthcare costs. Meanwhile, demand for high-quality generics is expected to increase in the future, with a number of branded drugs going off-patent. The use of generics has saved the US healthcare system over $XX trillion from 2000 through 2010 (Generic Pharmaceutical Association (GPhA), press release, August 2, 2012).

In 'pure generic' markets such as the US, the UK, the Netherlands and Israel, generic pharmaceuticals are substituted by the pharmacist for their brand name equivalent. In these markets, physicians or patients have little control over the choice of generic manufacturer. Moreover, generic drugs are not actively promoted to physicians, and the relationship between the generic manufacturer, pharmacy chains, distributors, health funds, and other health insurers is important.

In 'branded generic' markets such as Poland, Austria, Hungary, and some Asian and Latin American countries, generics are sold under brand names, alongside the originator brand. In these markets, pharmacists dispense the drug prescribed by the physician. Substitution between originator brands, branded generic and/or generic drugs is often limited without the physician's consent. Generic products are actively promoted and a sales force is necessary.

In hybrid markets, such as Germany, France, Italy and Spain, both elements are visible. In other markets, substitution is permitted but may be limited by market forces such as brand strength and reimbursement policies.

To attain profits, some companies use 'Authorized Generics' (AGs), which gives access to significant profits without the filing of patent challenges that they are unlikely to win due to various constraints. However, the present scenario sees much synergy between generic companies and innovator companies.

Biosimilars are expected to give a significant push to the generic drug and biotechnology companies, provided the regulatory frameworks for their approval are made hassle-free in the major markets such as the US and Europe. Mergers and Acquisitions (M&As) are undertaken for a wide gamut of reasons, the most popular reasons being vertical integration, therapeutic expansion, geographic expansion and diversification.

3.2.1.2 ANDA Applications and Approvals are on the Rise

The number of ANDAs filed by generic companies has significantly increased between 2006 and 2011, indicating upcoming generic competition.

The figure below displays the number of generic ANDA approvals by the FDA between 2006 and 2011.

Figure 5: Generic Growth Strategies, Number of Generic ANDA Filed and Approvals, 2006-2011

Source: GBI Research; FDA, 2012a

Table 3: Generic Growth Strategies, Number of Generic ANDA Filed and Approvals, 2006-2011

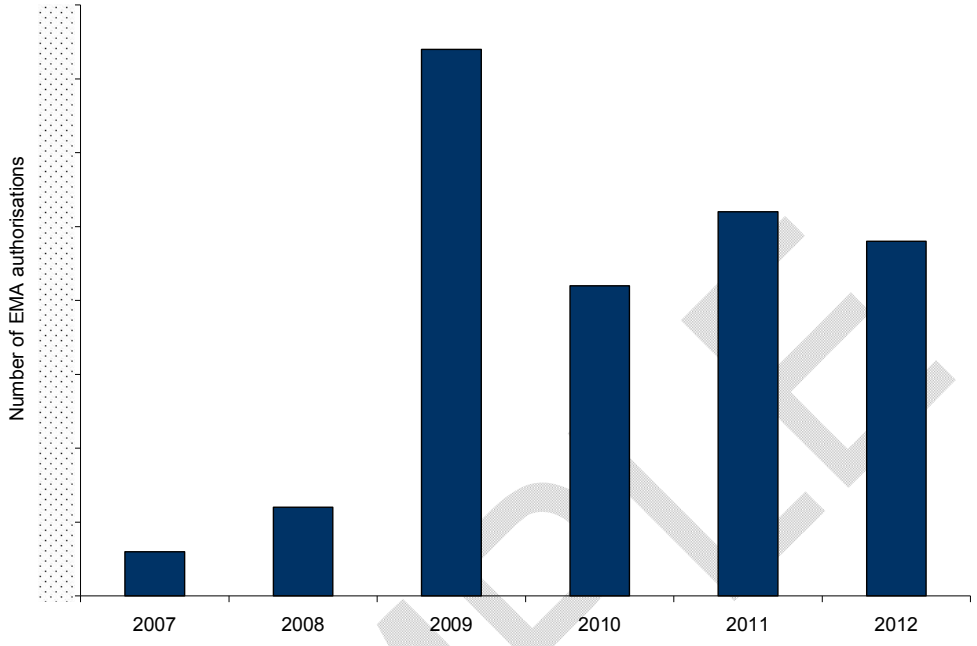
Year	2006	2007	2008	2009	2010	2011
Generic ANDA filed						
Generic ANDA approvals						

Source: GBI Research; FDA, 2012a

3.2.1.3 Generic Drug Opportunities in the European Market

The figure below displays the number of generic drug marketing authorizations by the EMA from 2007-2012.

Figure 7: Generic Growth Strategies, Number of EMA Authorized Generics, Europe, 2007-2012



Source: GBI Research; EMA, 2012

Table 5: Generic Growth Strategies, Number of EMA Authorized Generics, Europe, 2007-2012

Year	2007	2008	2009	2010	2011	2012
Number of EMA authorized generics						

Source: GBI Research; EMA, 2012

In Europe, according to the figures available from the European Medicines Agency (EMA), the number of marketing authorizations for generics is tilted significantly in favor of small molecule generic drugs in the generic drug products landscape, as observed between 2007 and 2012. In fact, the number of authorizations of generic drugs was highest in 2009, following which there have been over XX authorizations every year. The trend is expected to continue in the years to come, with patent expiries due for several small molecules.

8 Generic Growth Strategies - Appendix

8.1 Market Definitions

Generic Growth Strategies - Strategies employed to increase the market size of a generic drug.

Patent - A set of exclusive rights granted by a state or national government to an inventor/innovator or their assignee for a predefined period of time.

Biosimilars - Also known as follow-on biologics, they are subsequent versions of innovator biologic products produced after the patent and exclusivity expiry on the original product.

Contract Sales Organization - A company that assists other companies in the sales and marketing of products or services.

Contract Manufacturing Organization - A company that assists pharmaceutical and other companies by providing services in drug development and manufacturing.

AB-rated Drugs - Multisource drugs which have the same strength and belong to the same category are rated AB by the FDA if their bioequivalence study has been submitted.

8.2 Abbreviations

ACA - Affordable Care Act

AG - Authorized Generic

AIDS - Acquired Immune Deficiency Syndrome

ANDA - Abbreviated New Drug Application

APAC - Asia-Pacific

API - Active Pharmaceutical Ingredient

ARV - Antiretroviral

BGMA - British Generic Manufacturers Association

BPCIA - Biologics Price Competition and Innovation Act

CHMP - Committee for Medicinal Products for Human Use

CMO - Contract Manufacturing Organization

CNS - Central Nervous System

CRO - Clinical Research Organization

DH - Department of Health

DRL - Dr. Reddy's Laboratories

EDL - Essential Drug List

EMA - European Medicines Agency

EMEA - Europe, Middle East and Africa

FDA - Food and Drug Administration

FTC - Federal Trade Commission

FTF - First-To-File

G-CSF - Granulocyte Colony-Stimulating Factor

GSK - GlaxoSmithKline

HGH - Human Growth Hormone

HIV - Human Immunodeficiency Virus

INN - International Nonproprietary Name

LIS - Low Income Subsidy

LMWH - low Molecular Weight Heparin

M&A - Mergers and Acquisitions

mAb - Monoclonal Antibody

MHLW - Ministry of Health, Labour and Welfare

MPD - Medicare Part D

NCE - New Chemical Entity

NDA - New Drug Application

NHS BSA - National Health Service Business Services Authority

OTC - Over-the-Counter

PMDA - Pharmaceutical and Medical Device Agency

R&D - Research and Development

rFSH - Recombinant Follicle Stimulating Hormone

ROW - Rest of the World

SHI - Statutory Health Insurance

TNF - Tumor Necrosis Factor

WHO - World Health Organization

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8.4 Research Methodology

GBI Research's dedicated research and analysis teams consist of experienced professionals with a pedigree in marketing, market research, consulting backgrounds in the medical devices industry, and advanced statistical expertise.

GBI Research adheres to the codes of practice of the Market Research Society (www.mrs.org.uk) and the Strategic and Competitive Intelligence Professionals (www.scip.org).

All GBI Research databases are continuously updated and revised.

8.4.1 Coverage

The objective of updating GBI Research's coverage is to ensure that it represents the most up-to-date vision of the industry possible.

Changes to the industry taxonomy are decided on the basis of extensive research of company, association and competitor sources.

Company coverage is based on three key factors: market capitalization, revenues, and media attention/innovation/market potential.

- An exhaustive search of 56 member exchanges is conducted, and companies are prioritized on the basis of their market capitalization;
- The estimated revenues of all major companies, including private and governmental, are gathered and used to prioritize coverage; and,
- Companies which are making the news, or which are of particular interest due to their innovative approach, are prioritized.

GBI Research aims to cover all major news events and deals in the medical industry, with its databases updated on a daily basis.

The coverage is further streamlined and strengthened with additional inputs from GBI Research's expert panel (see below).

8.4.2 Secondary Research

The research process begins with exhaustive secondary research on internal and external sources being carried out to source qualitative and quantitative information relating to each market.

The secondary research sources that are typically referred to include, but are not limited to:

- Company websites, annual reports, financial reports, broker reports, investor presentations and US Securities and Exchanges Commission (SEC) filings.
- Industry trade journals, scientific journals and other technical literature.
- Internal and external proprietary databases.
- Relevant patent and regulatory databases.
- National government documents, statistical databases and market reports.
- Procedure registries.
- News articles, press releases and webcasts specific to the companies operating in the market.

8.4.3 Primary Research

GBI Research conducts hundreds of primary interviews each year with industry participants and commentators, in order to validate its data and analysis. A typical research interview fulfills the following functions:

- It provides first-hand information on the market size, market trends, growth trends, competitive landscape, future outlook, etc.
- Helps in validating and strengthening the secondary research findings; and
- Further develops the analysis team's expertise and market understanding.

Primary research involves email interactions, telephone interviews, and face-to-face interviews for each market, category, segment and sub-segment across geographies.

The participants who typically take part in such a process include, but are not limited to:

- Industry participants: CEOs, VPs, marketing/product managers, market intelligence managers and national sales managers.
- Hospital stores, laboratories, pharmacies, distributors and paramedics.
- Outside experts: Investment bankers, valuation experts, research analysts specializing in specific pharmaceutical and healthcare markets; and
- Key Opinion Leaders: Physicians and surgeons specializing in different therapeutic areas.

8.4.4 Expert Panel Validation

GBI Research uses a panel of experts to cross-verify its databases and forecasts.

GBI Research's expert panel comprises marketing managers, product specialists, international sales managers from pharmaceutical companies, academics from research universities, and key opinion leaders from hospitals.

Historic data and forecasts are relayed to GBI Research's expert panel for feedback and adjusted in accordance with their feedback.

8.6 Disclaimer