

EvaluatePharma®

World Preview 2016, Outlook to 2022

Executive Summary

9th Edition – September 2016

 Evaluate®

Analysis Highlights

- Worldwide prescription drug sales forecasted to grow at 6.3% (CAGR) 2016-2022
 - 50% of the 2022 increase in sales to come from R&D projects (+\$169bn)
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- Novartis and Roche to compete head to head for the crown of worldwide prescription sales in 2022. Pfizer to challenge them following Medivation acquisition.
 - Celgene (+16%) and Shire (+19%) expected to record the fastest sales growth (CAGR) by 2022.
 - Biologics to contribute 50% of the Top 100 product sales by 2022; Roche leads market.
 - Roche has the highest valued pipeline (NPV) at \$43bn in 2022.
 - Gilead is the top value creator based on 2015 sales from recently launched products.
 - Tecfidera best commercial launch after hepatitis C's success stories Harvoni and Sovaldi.
 - Roche's ocrevus and Sanofi's dupilumab projected to be the most valuable R&D projects.
 - Worldwide pharmaceutical R&D spend expected to grow by 2.8% (CAGR) to \$182bn in 2022.
 - Roche overtakes Novartis with biggest spend on pharmaceutical R&D in 2022.
 - New drug approvals in 2015 reach a record 56 NMEs.
 - Oncology is still the largest therapy area by sales (+12.5% CAGR) 2016-22.
 - Roche remains the leader of the oncology field but its growth is set to fade due to biosimilars.
 - Abbvie still dominates anti-rheumatics market in 2022; high expectations on Lilly's baricitinib.
 - GlaxoSmithKline gains vaccines market leadership following oncology portfolio deal swap with Novartis.
 - Pfizer's pneumococcal vaccine Prevnar-13 remains the top selling vaccines product.
 - Gilead's lead continues in anti-viral market in 2022 largely due to its HIV portfolio.
 - Opdivo and Revlimid to compete for the top selling products in the world in 2022.
 - Roche products make up 10% of top 50 selling products in the world in 2022.
 - AbbVie's Humira will continue to be the leading product in the USA in 2022, with sales of \$10.7bn.
 - Xarelto to emerge as the top selling brand in Europe with €2.5bn sales in 2022.

Worldwide Prescription Drug Sales (2008-2022)



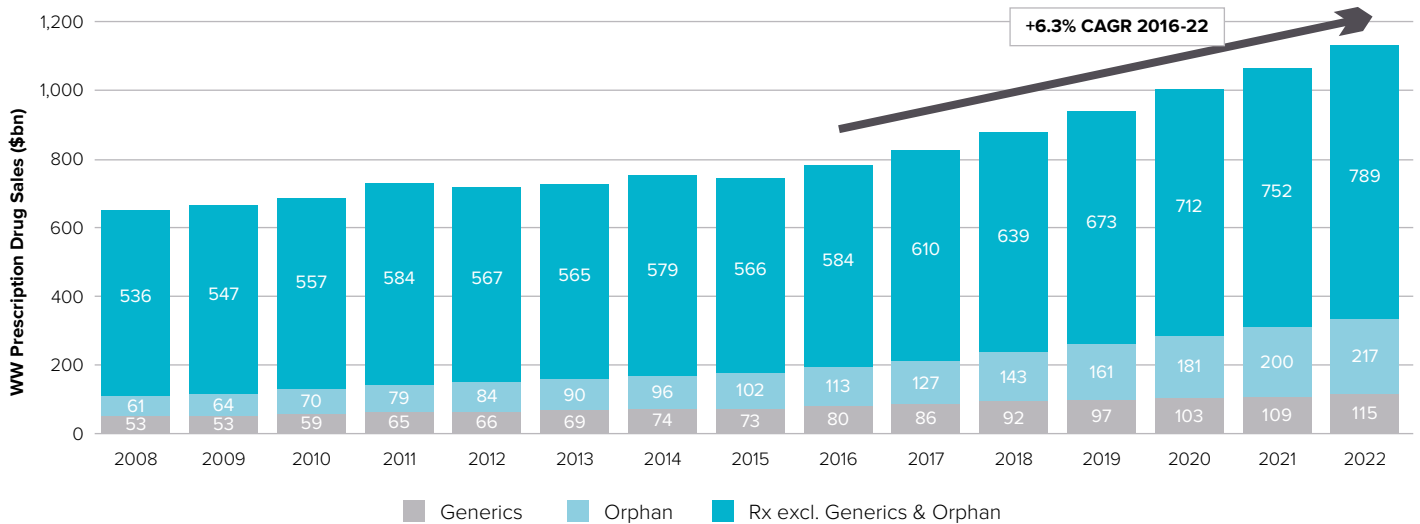
Worldwide prescription drug sales forecasted to grow at 6.3% (CAGR) through to 2022.

According to EvaluatePharma® consensus forecasts, the pharmaceutical industry is set to grow at 6.3% per year (CAGR) reaching \$1.12tr by 2022. The new wave of innovative therapies (Opdivo, Keytruda and Ibrance among others) approved by regulators in the last three years will be the core engine behind this trend and it also seems to prove that the transformation of the pharmaceutical R&D model is moving into the right direction. The orphan drug market is expected to almost double between 2016-22, peaking at \$217bn in 2022 and further demonstrates that R&D programmes are increasingly oriented towards more narrow patient populations characterised by larger unmet need and easier market access.

There are two dynamics at play that could affect this optimistic outlook. Firstly, the \$249bn of sales at risk between 2016 and 2022 signals that the pharma industry has just entered a second patent cliff era where top biologic blockbusters will be challenged by biosimilars. And the current scenario modelled by brokers tends to forecast a very conservative impact for upcoming biosimilars. Secondly, the US market access landscape is rapidly transforming and the criteria set by payers, once looser, are much more stringent. The slow uptake of Entresto and the PCSK9 inhibitors (Praluent and Repatha), as well as the recent increase in the number of drug exclusions announced by both CVS and Express Scripts are points in case.

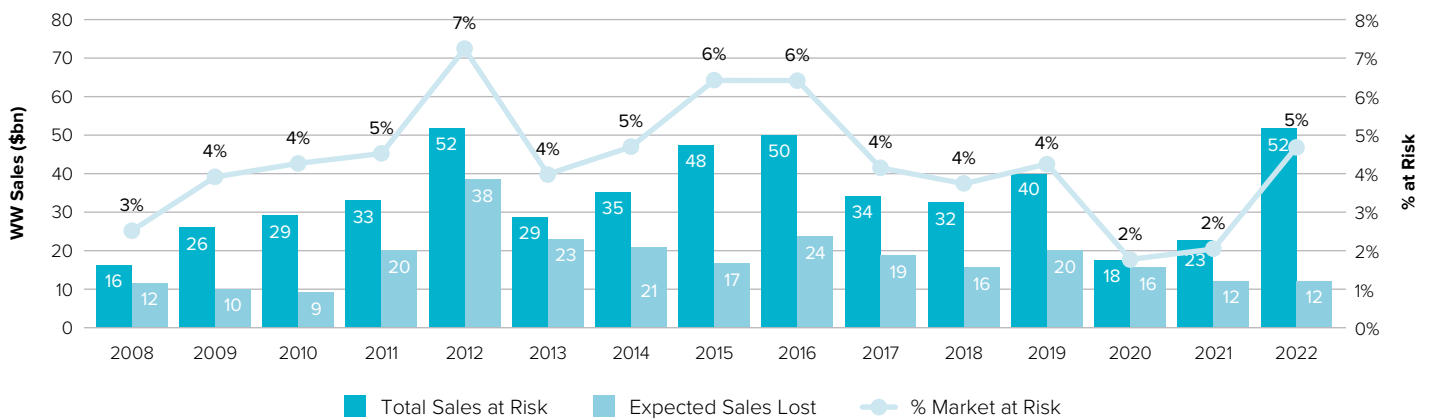
Worldwide Total Prescription Drug Sales (2008-2022)

Source: EvaluatePharma® August 2016



Worldwide Sales At Risk from Patent Expiration (2008-2022)

Source: EvaluatePharma® August 2016



Patent Analysis: 'Total Sales at Risk' represents the worldwide product sales in the year prior to patent expiry but allocated to the year of expiry. E.g. Plavix had sales of \$7.1bn in 2011, this is shown above as 'At Risk' in 2012.



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www.evaluate.com

Evaluate Headquarters

Evaluate Ltd.
11-29 Fashion Street
London E1 6PX
United Kingdom
T +44 (0)20 7377 0800
F +44 (0)20 7539 1801

Evaluate North America

EvaluatePharma USA Inc.
15 Broad Street, Suite 401
Boston, MA 02109, USA
T +1 617 573 9450
F +1 617 573 9542

Evaluate Japan

Evaluate Japan KK
Akasaka Garden City 4F
4-15-1 Akasaka, Minato-ku
Tokyo 107-0052, Japan
T +81 (0)80 1164 4754