

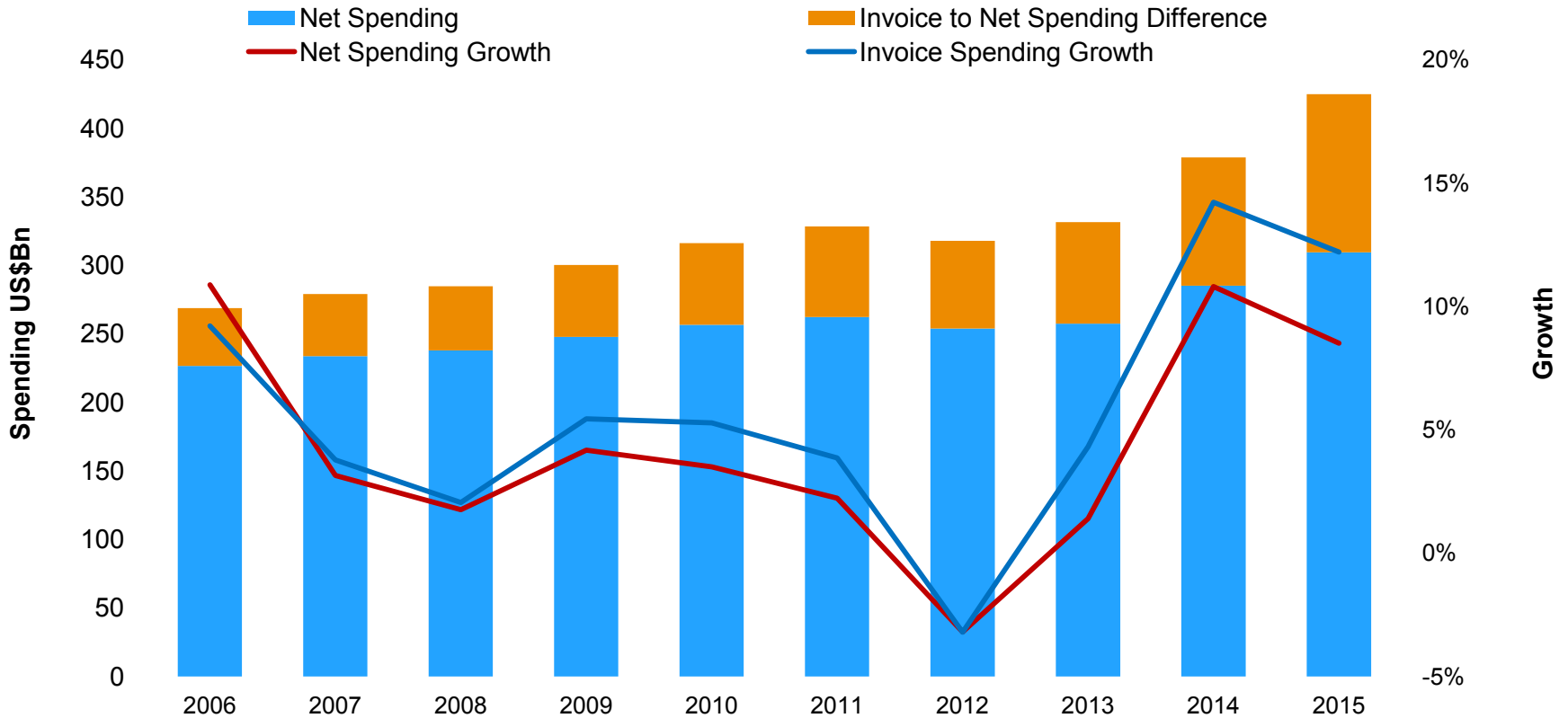
Perspective on Prescription Drug Costs

Medicare Technical Review Panel

December 20, 2016

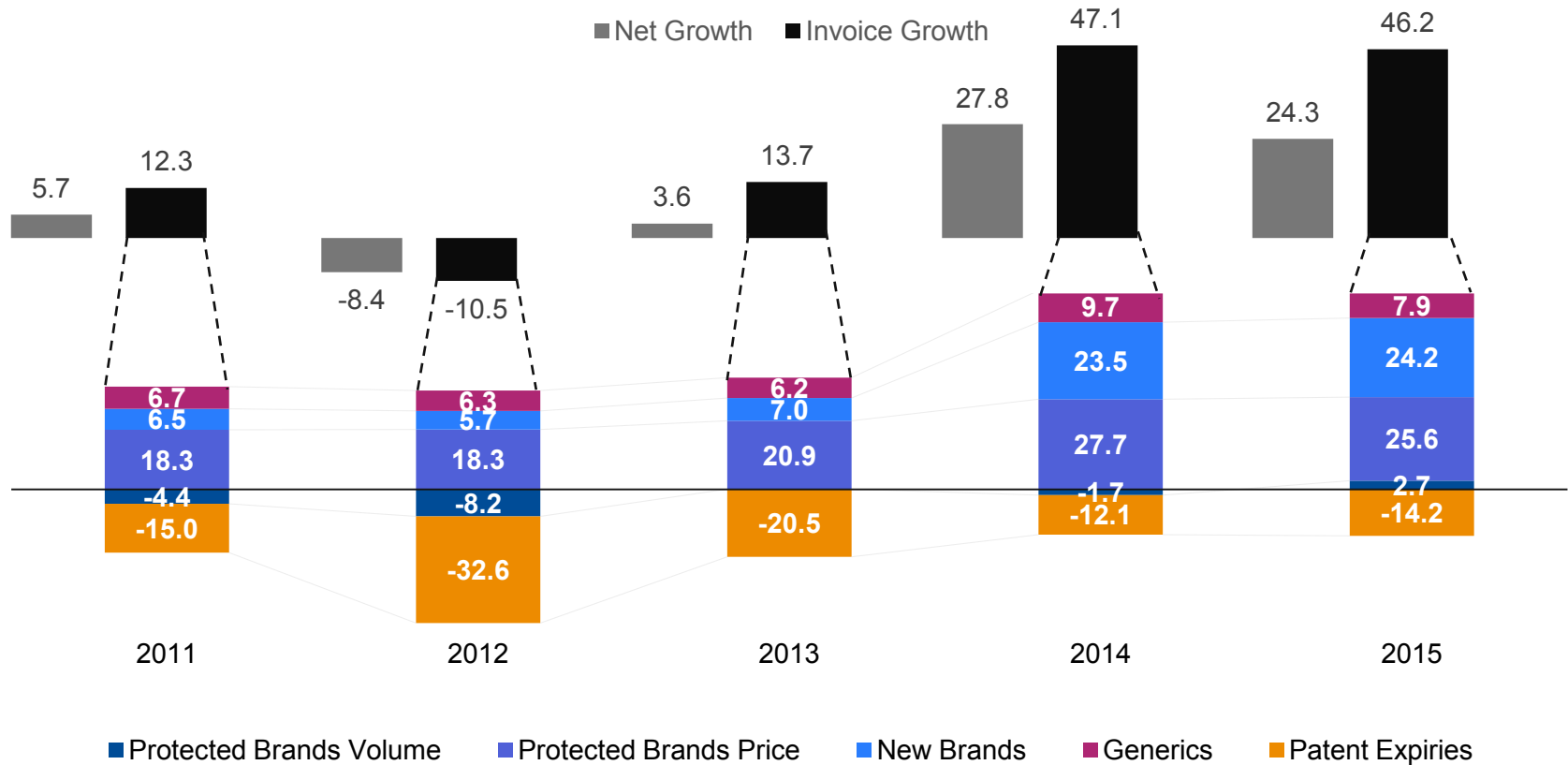
Murray Aitken, Executive Director

Total Spending on Medicines US\$Bn



Source: U.S. Census Bureau; U.S. Bureau of Economic Analysis; IMS Health, National Sales Perspectives, Jan 2016

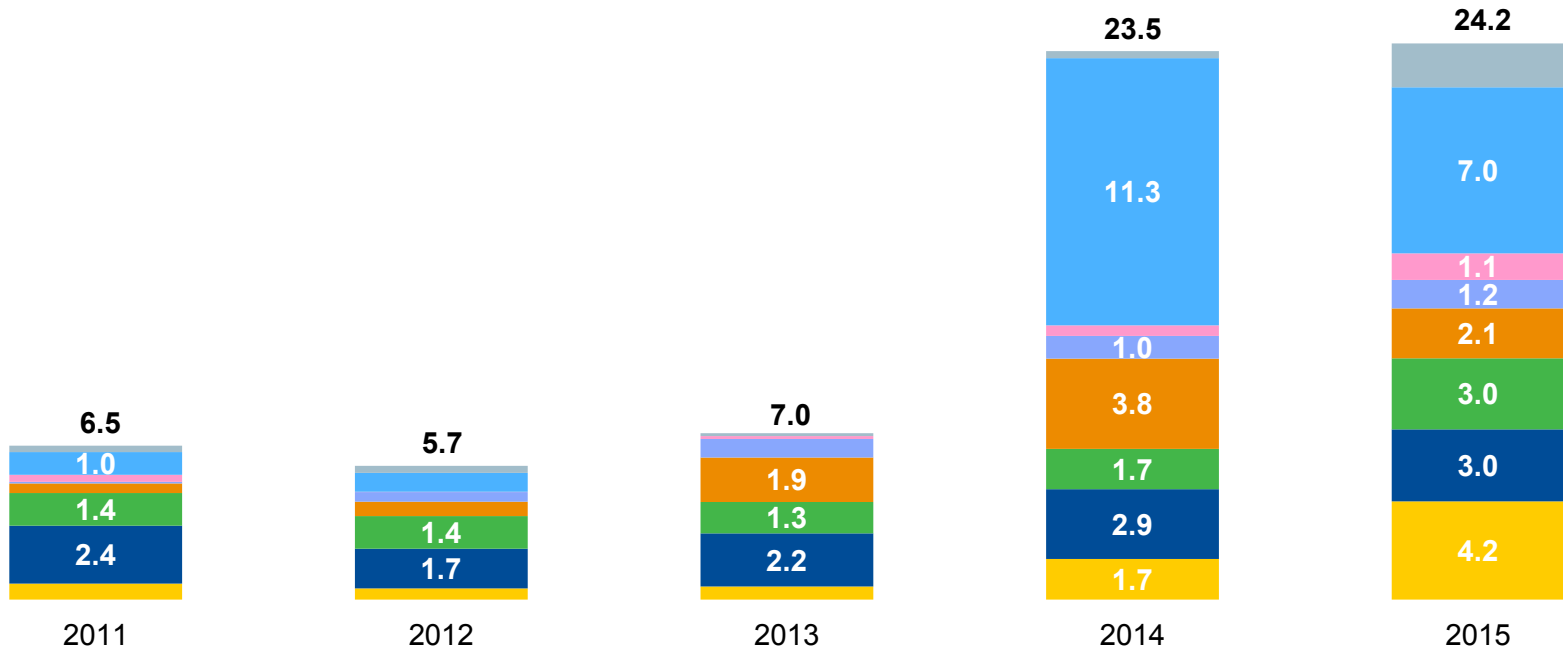
Spending Growth Drivers US\$Bn



Source: IMS Health, National Sales Perspectives, Jan 2016

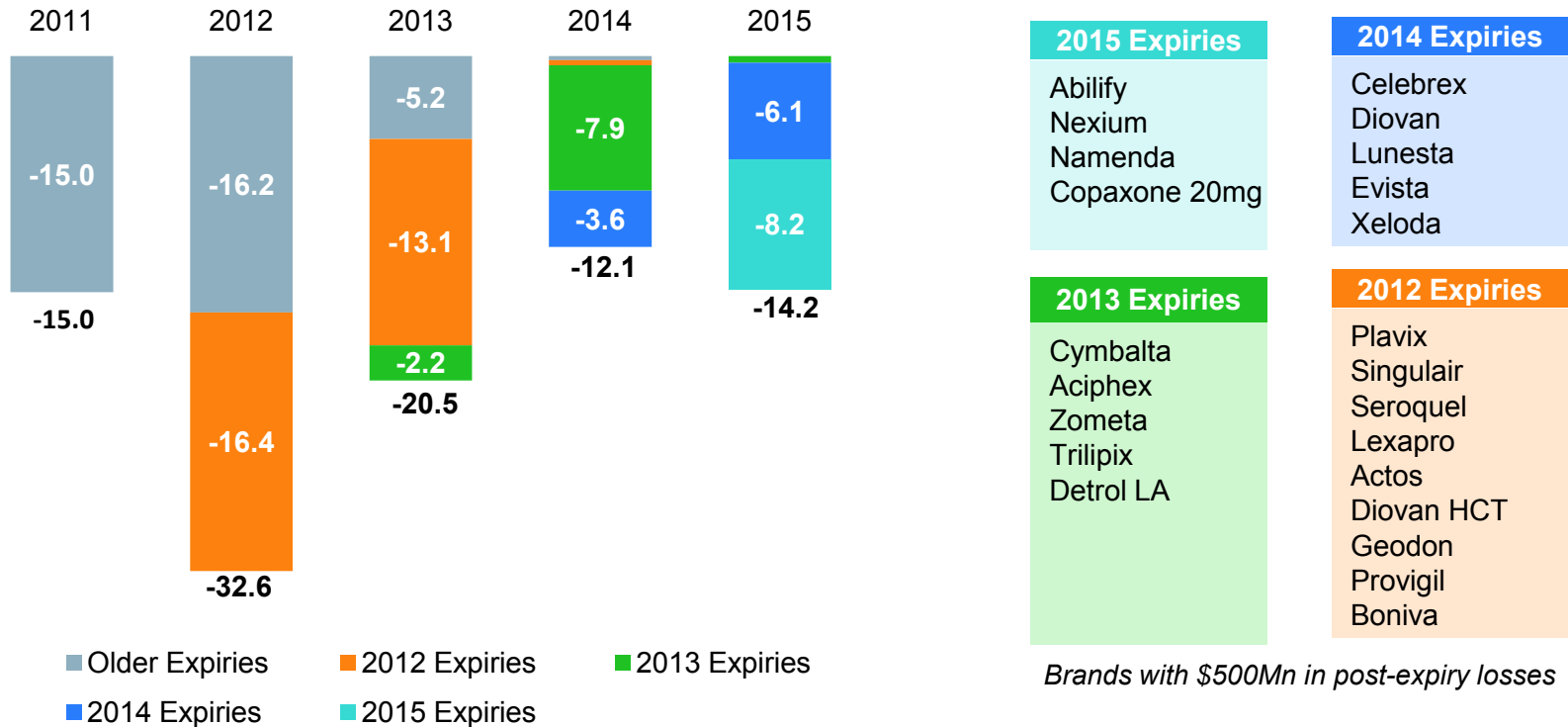
New Brand Spending Growth US\$Bn

■ Diabetes
 ■ Other Traditional
 ■ Oncology
 ■ Multiple Sclerosis
 ■ HIV Antivirals
 ■ Autoimmune
 ■ Viral Hepatitis
 ■ Other Specialty



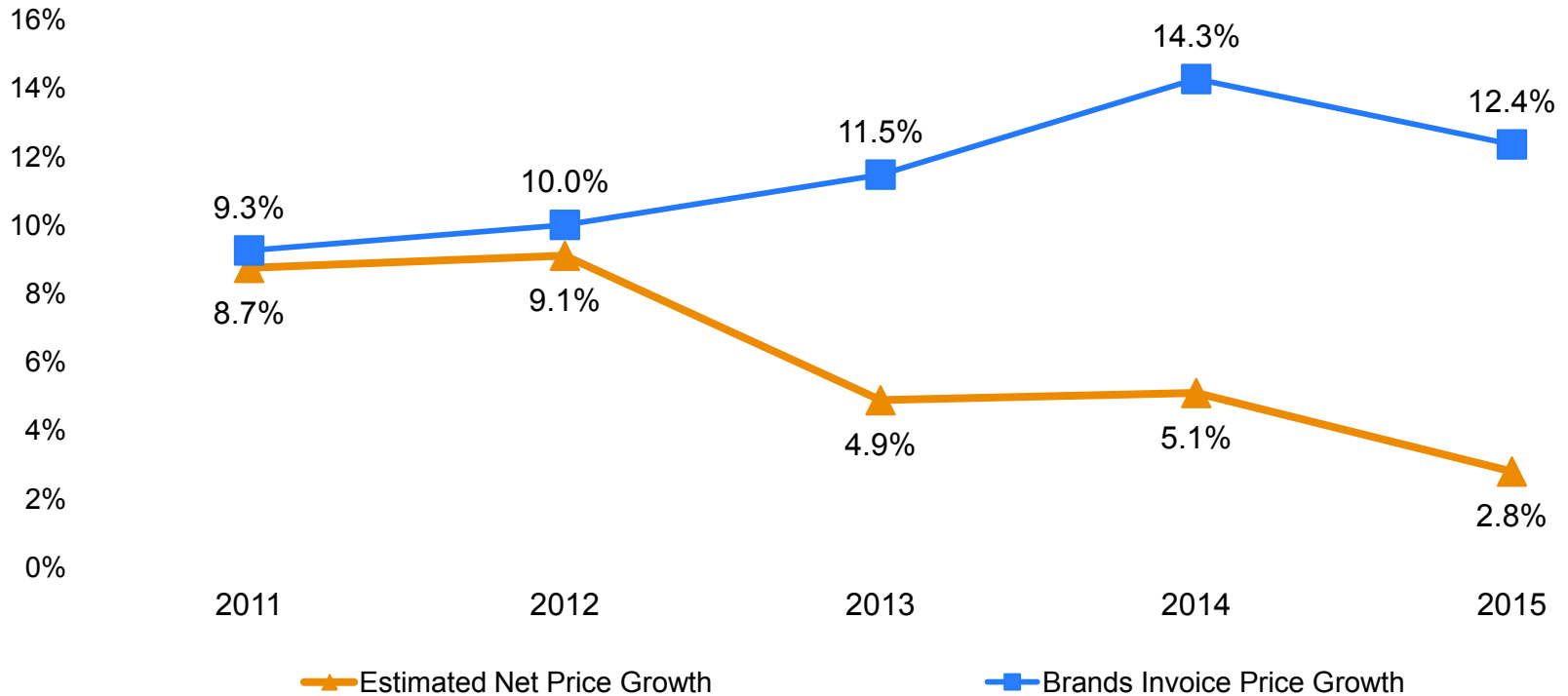
Source: IMS Health, National Sales Perspectives, Jan 2016

Decline in Brand Spending from Loss of Exclusivity US\$Bn



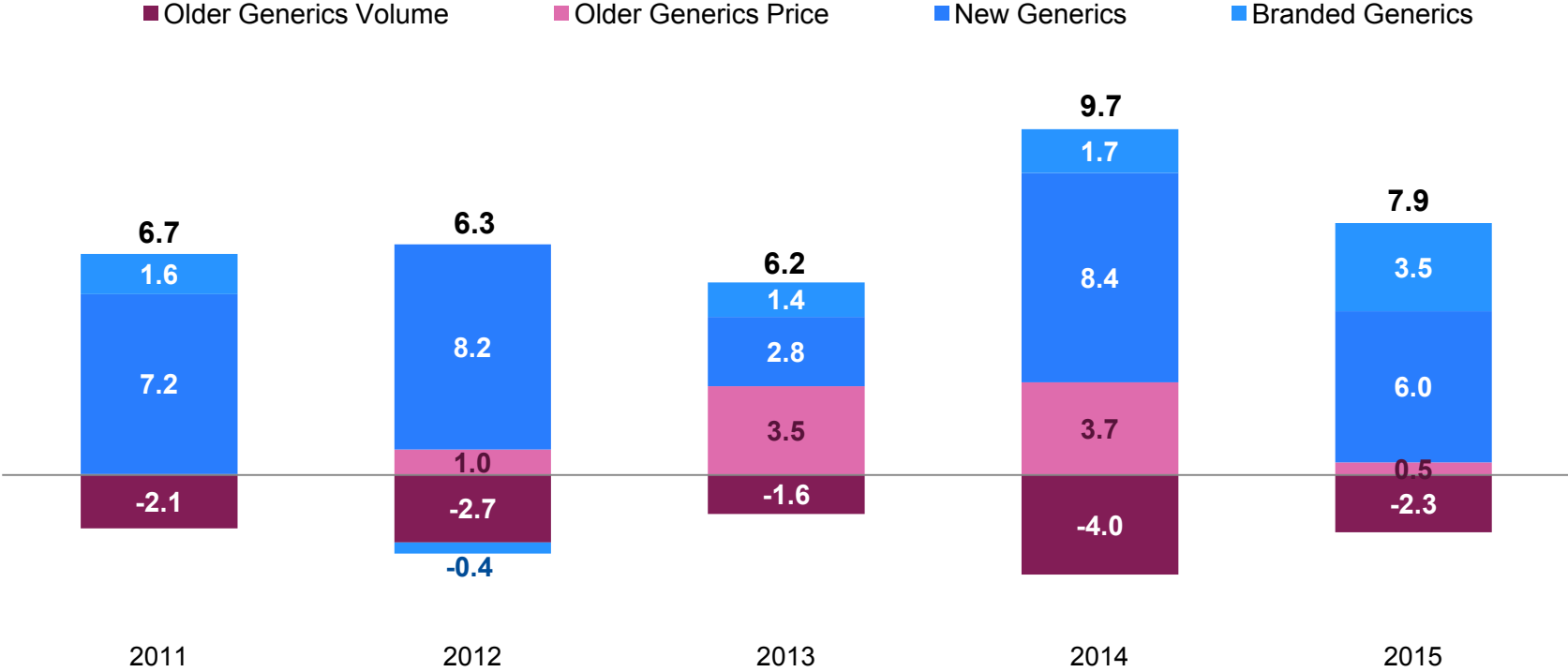
Source: IMS Health, National Sales Perspectives, Jan 2016

Protected Brand Invoice and Net Price Growth



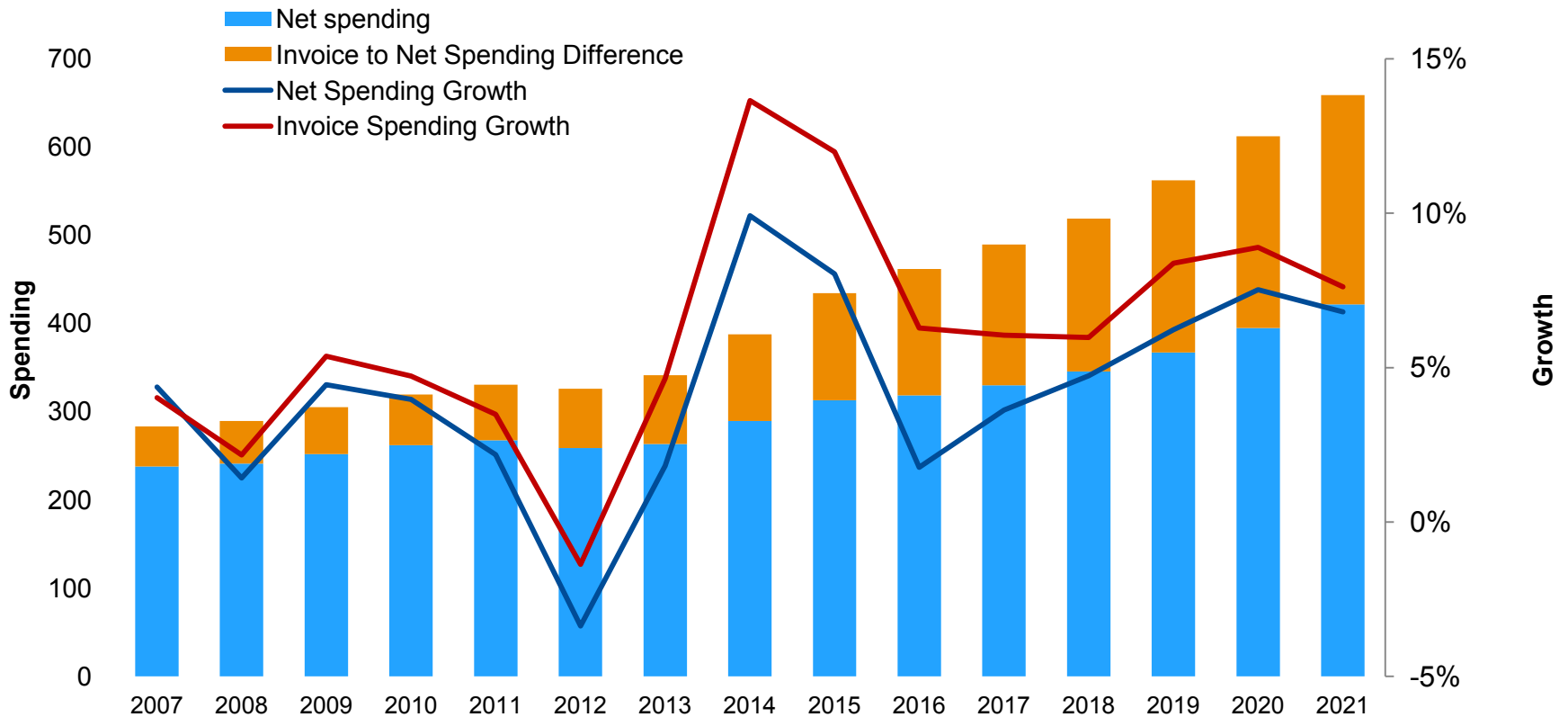
Source: IMS Health, National Sales Perspectives, IMS Institute for Healthcare Informatics, Mar 2016

Contribution to Generic Spending Growth US\$Bn



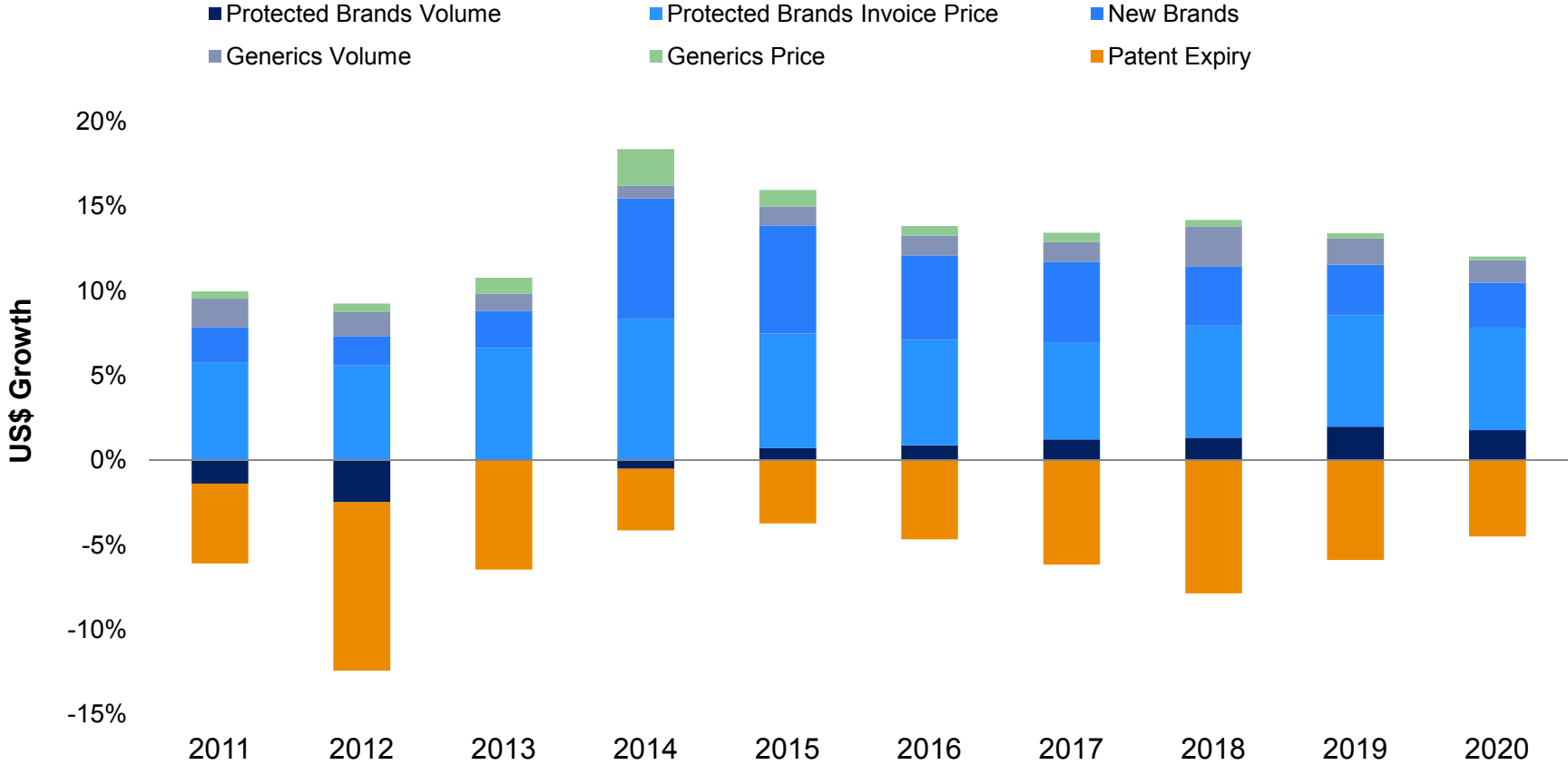
Source: IMS Health, National Sales Perspectives, Dec 2015

U.S. Medicines Spending and Growth 2007–2021 US\$Bn



Source: QuintilesIMS Market Prognosis, Sept 2016; QuintilesIMS Institute, Oct 2016

U.S. Spending Growth 2010-2020 US\$Bn



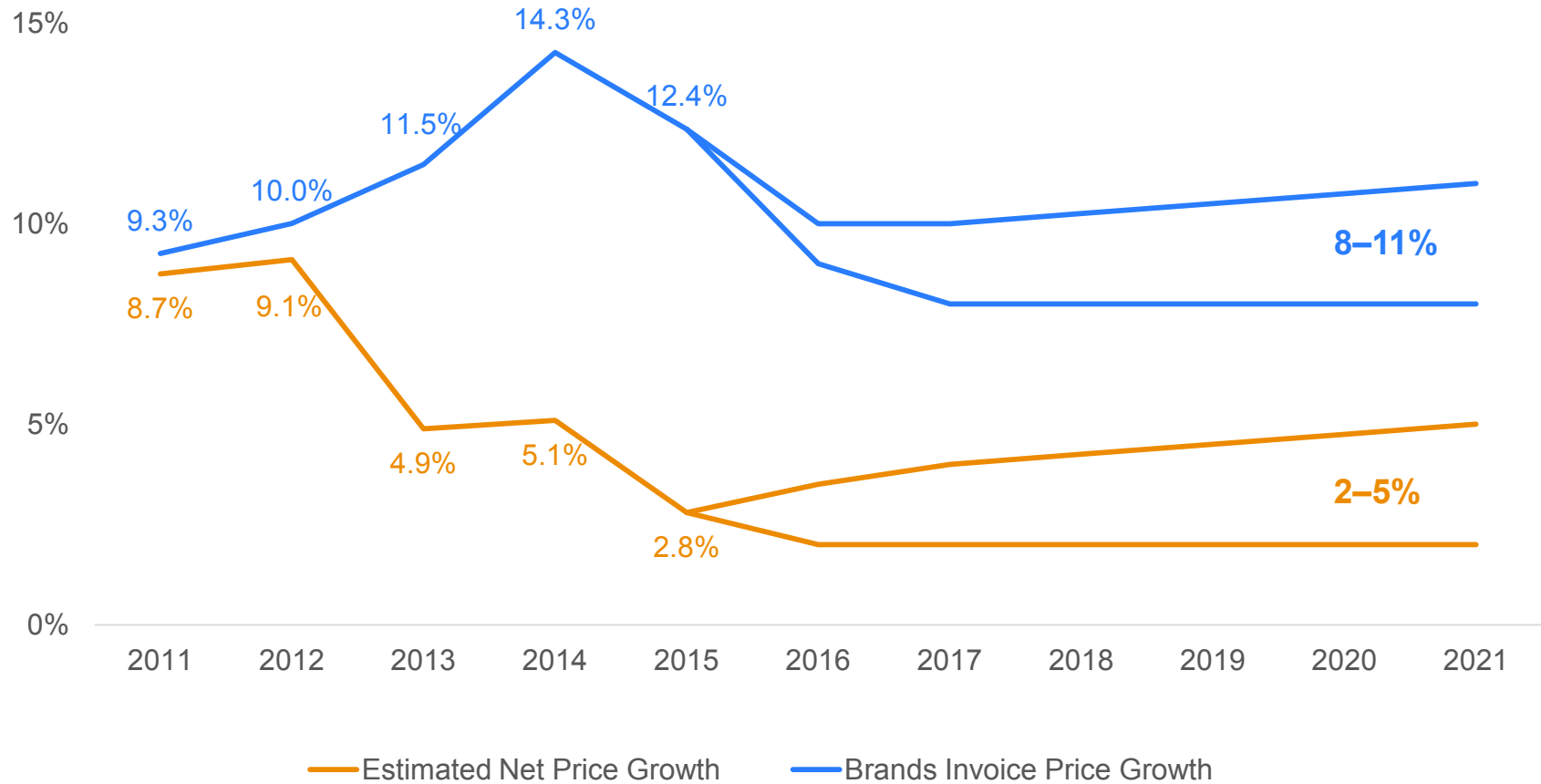
Source: IMS Health, Market Prognosis, National Prescription Audit, IMS Institute for Healthcare Informatics, Jan 2016

Outlook for U.S. Medicine Pricing through 2021

Component	Expectation	Comment
Price levels for new brands launched	Specialty brands are on average 15–20x more expensive than traditional new brands and more than half of new brand spending to 2021 will be specialty	Pricing levels for new brands will have premium or discount from existing treatment options based on clinical profile and benefit.
Price increases for protected brands (invoice)	8–11% brand increases expected to 2021	Reflects lower than the average 10–12% over past 5 years due to increased transparency, and competition
Pricing for protected brands on net basis	2–5% net price increases expected to 2021	Slightly higher than in 2015 net price growth of 2.8% which was affected by specific large competition-driven increases in rebates in Diabetes, Respiratory and HCV
Generic prices	<p>Average generic is 60–70% below brand price upon introduction, reaching 80–90% after 2–3 years</p> <p>Older generic medicines pricing will have no impact on the growth forecast</p>	<p>Assumes continued generic pricing dynamics relative to pre-expiry branded price as observed over the past five years i.e. 60–70% below brand in first 6 months and 80–90% reduction after 24 months of generic availability</p> <p>Pricing of older generics is under scrutiny from payers and policy makers, the FDA is clearing a backlog of generic approvals and these pricing dynamics are unlikely to be a driver in the future</p>

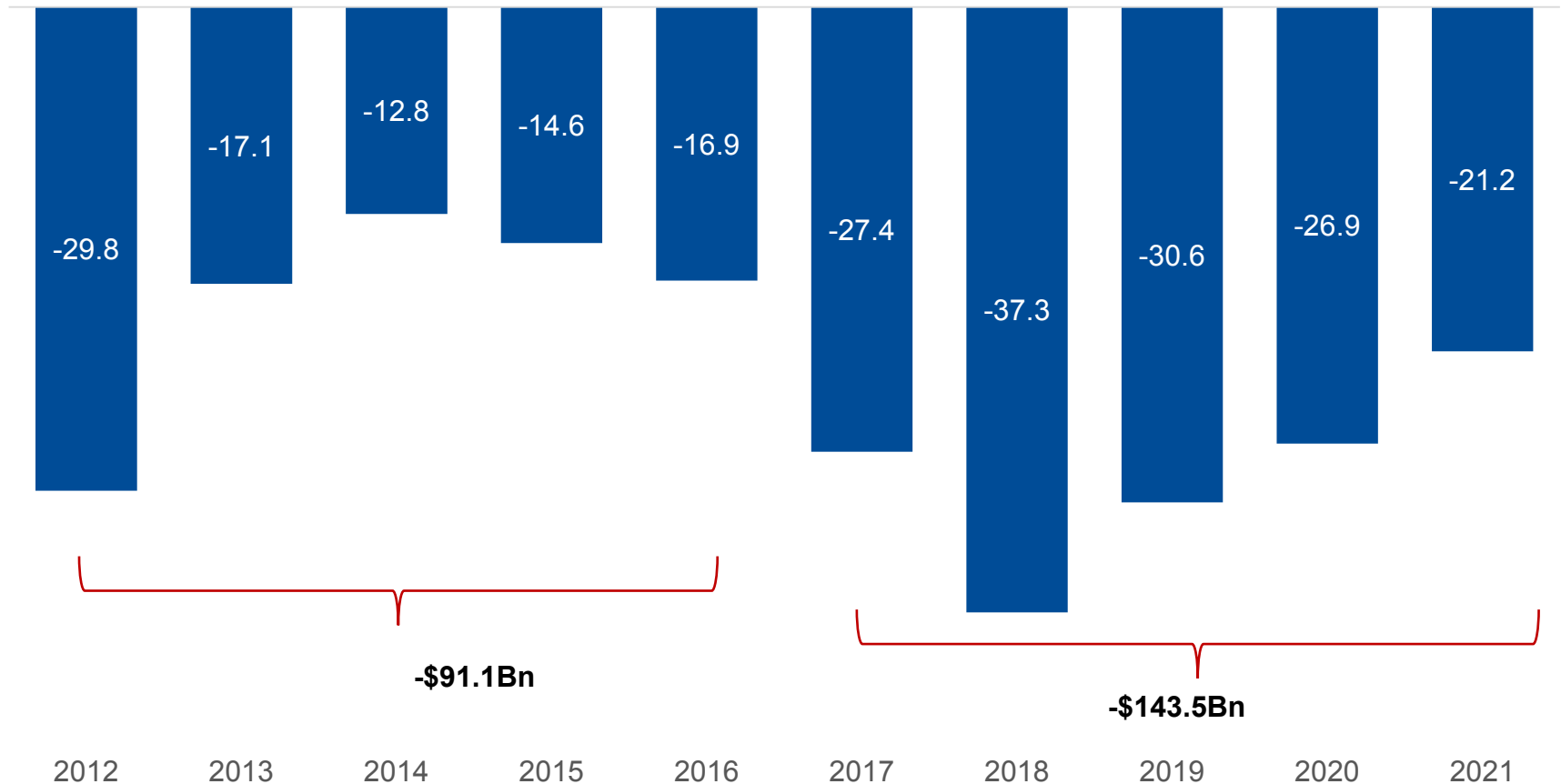
Source: QuintilesIMS Institute, Oct 2016

Price Concessions for Branded Products 2011-2016



Source: QuintilesIMS National Sales Perspectives, QuintilesIMS Institute, Oct 2016

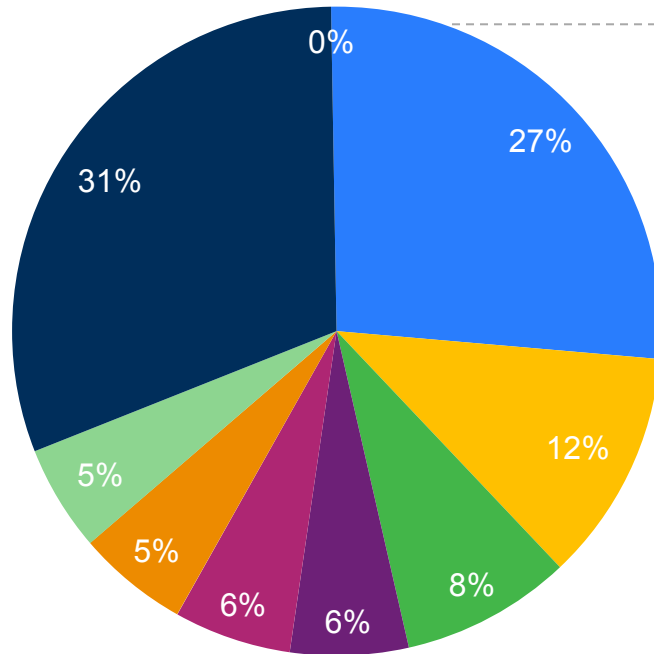
Impact of U.S. Losses of Exclusivity on Brand Spending US\$Bn



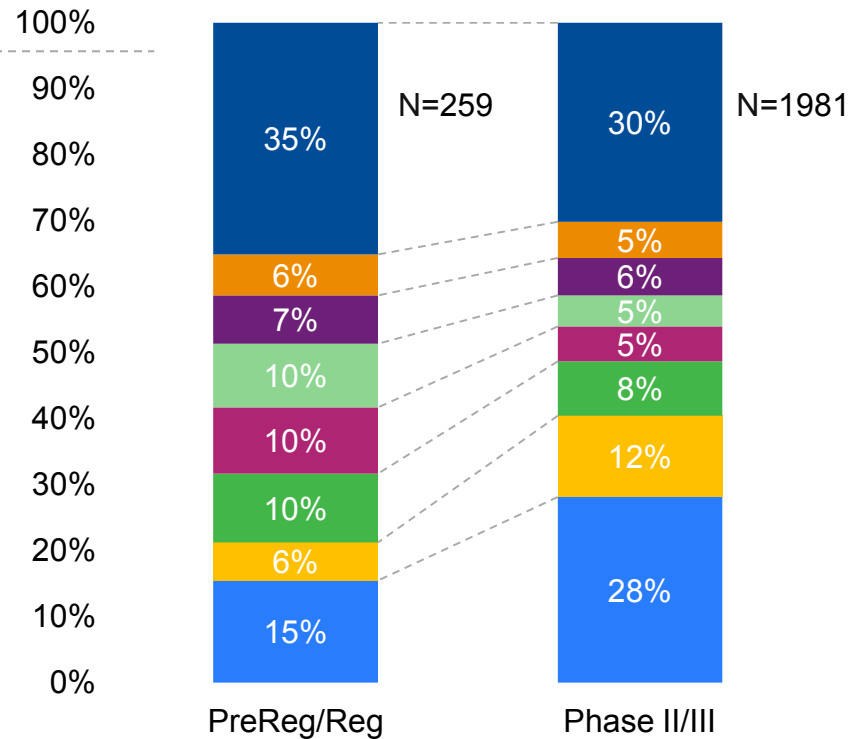
Source: IMS Market Prognosis, Sept 2016; QuintilesIMS Institute, Oct 2016

Global Medicines in Late Stage Development in 2016

Phase II-Registered



Percent of Pipeline

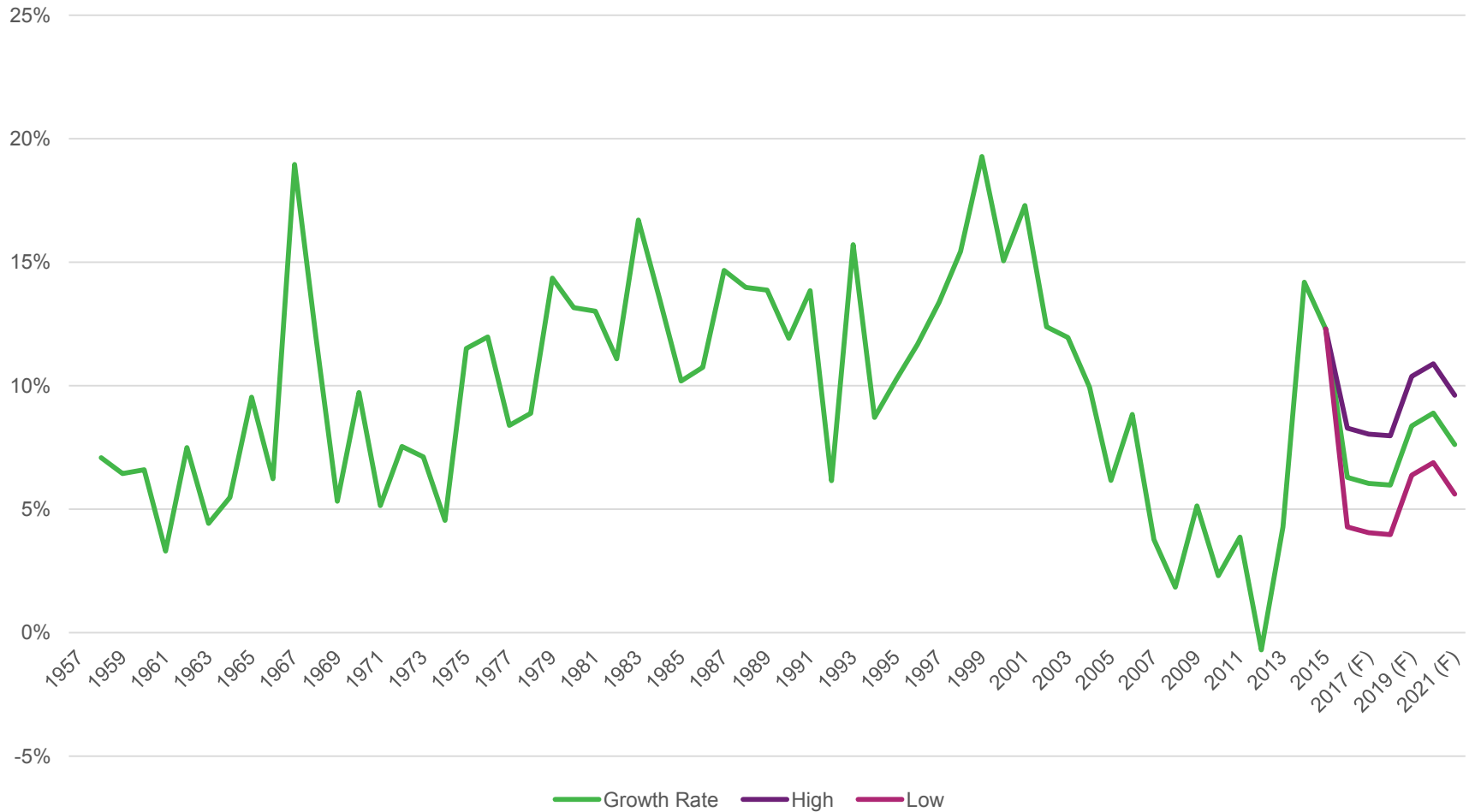


- Oncologics
- CNS
- Anti-infectives & Antivirals
- Cardiovascular
- Arthritis/Pain
- Immune System
- Genito-urinary & Hormones
- Others

Source: QuintilesIMS R&D Focus, Sept 2016; QuintilesIMS Institute, Oct 2016

U.S. Market Growth 1957-2021

US market growth



Source: QuintilesIMS Institute