



**VitalTransformation**

The impact of health technology made simple



# H.R. 3 – Medicare D Reform

## Calculating the Impact of International Reference Pricing on California's Biopharmaceutical Innovation Ecosystem

Prepared in collaboration with



# Introduction

- Vital Transformation, an international health economics and healthcare real world evidence strategy consultancy, was asked to conduct an analysis of the impact of international pricing, as proposed in H.R. 3, on California's biopharmaceutical innovation ecosystem, and specifically the impact on investment and small company capital formation and new drug pipeline development.

# Study Summary Overview

## Medicare Part D International Reference Pricing

- 2017 Medicare total drug spend and per dose pricing taken directly from [Medicare Part D Spending Dashboard](#)
- Corporate product revenue taken from 2017 audited annual reports, and cross referenced with Medtrack “Pharma Intelligence” and US Government Bureau of Labor Statistics.
- Reference pricing for 79 assets (69 in this analysis after the removal of diagnostics and consolidation of insulin platforms) taken directly from House Ways and Means study, “Using External Reference Pricing In Medicare Part D To Reduce Drug Price Differentials With Other Countries”, So-Yeon Kang et al, 2019
- Reference pricing 1.2x ‘margin’ taken from “H.R. 3 - Drug Price Negotiation Bill Summary” and applied directly to House Ways and Means reference pricing
- Our modeling predicts an annual reduction in revenue for the impacted firms of \$71.6 bil (five year impact of \$358 bil), compared to CBO analysis of \$334 over 5 years. Our financial impact is for the entire market, and is likely underestimated as we look at only the 79 assets in the Ways and Means study, not the 125 drugs included in the CBO analysis. However, given the results, we feel the impact will be clear to all readers.
- We do not agree with the CBO's assessment of market reduction of 8-15 drugs over 10 years as they do not fully analyze and depict anticipated investment behavior under H.R. 3. The data in our study shows a much greater impact: the number of new medicines developed by California-based companies supported by revenue generated by Medicare Part D products would fall from 25 to 3 over the next 10 years, an 88% reduction.

# Overview:

- [House Ways and Means](#) reference pricing methodology
- House Ways and Means reference pricing applied in H.R. 3
- House reference pricing and H.R. 3 overall impact on commercial pricing and industry revenue
- Reference pricing revenue reductions and investor behavior
- Impact assessment of reference pricing on the California Biopharma Market
- US Biopharma sector growth, and analysis of H.R. 3 impact on jobs, and stock market value

# Methodology: Ways And Means Study

## “Using External Reference Pricing In Medicare Part D To Reduce Drug Price Differentials With Other Countries”

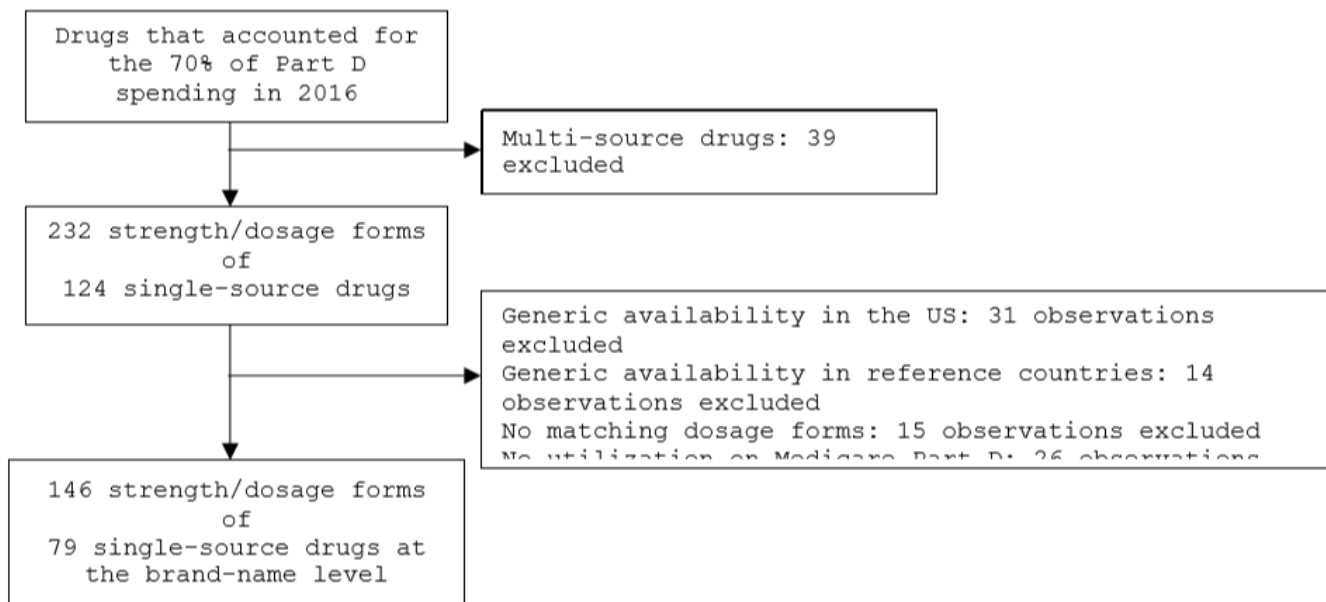
So-Yeon Kang et al, : [10.1377/hlthaff.2018.05207](https://doi.org/10.1377/hlthaff.2018.05207) HEALTH AFFAIRS 38, NO. 5 (2019): 804–811 ©2019 Project HOPE— The People-to-People Health Foundation, Inc

- Study compared the price differentials in the US and the UK, Japan, and Ontario (Canada) for [79 single-source brand-name drugs](#) that had been on the market for at least three years, and consumed 70% of Part D spending.
- US prices averaged 3.2–4.1 times higher after rebates were considered. The price differential for individual drugs varied from 1.3 to 70.1.
- The estimated cost reduction to Medicare Part D of adopting the average price of drugs in the reference countries was \$72.9 billion in 2018.

# Ways and Means Selection Methodology – 79 Drugs

So-Yeon Kang et al, : [10.1377/hlthaff.2018.05207](https://doi.org/10.1377/hlthaff.2018.05207) HEALTH AFFAIRS 38, NO. 5 (2019)

## Appendix Exhibit 1. Sample selection strategy



# Medicare Part D – Reference Price Impact at the Firm Level

Company	Number of Drugs	US Medicare D Sales 2017 \$US Mil	New Medicare Revenue Based on Reference Price	Change in Medicare Revenue	Reduction in Part D Revenue %	Total R&D Spend 2017	Lost Revenue as a % of R&D	Lost Revenue as 20% of R&D
Company A	1	\$542	\$157	-\$385	-71%	\$361	-107%	-21%
Company B	4	\$3,677	\$577	-\$3,100	-84%	\$3,078	-101%	-20%
Company C	5	\$4,400	\$855	-\$3,545	-81%	\$3,925	-90%	-18%
Company D	2	\$3,952	\$1,193	-\$2,760	-70%	\$3,274	-84%	-17%
Company E	3	\$1,947	\$342	-\$1,604	-82%	\$2,254	-71%	-14%
Company F	6	\$4,643	\$2,080	-\$2,563	-55%	\$3,734	-69%	-14%
Company G	2	\$3,197	\$891	-\$2,306	-72%	\$3,562	-65%	-13%
Company H	4	\$3,758	\$855	-\$2,903	-77%	\$4,894	-59%	-12%
Company I	4	\$5,591	\$2,547	-\$3,044	-54%	\$5,472	-56%	-11%
Company J	2	\$2,818	\$584	-\$2,235	-79%	\$4,482	-50%	-10%
Company K	5	\$3,187	\$646	-\$2,541	-80%	\$5,357	-47%	-9%
Company L	1	\$724	\$210	-\$514	-71%	\$1,326	-39%	-8%
Company M	4	\$3,885	\$536	-\$3,350	-86%	\$9,818	-34%	-7%
Company N	1	\$855	\$302	-\$553	-65%	\$1,957	-28%	-6%
Company O	1	\$462	\$134	-\$328	-71%	\$1,161	-28%	-6%
Company P	3	\$4,935	\$1,901	-\$3,034	-61%	\$14,014	-22%	-4%
Company Q	6	\$3,002	\$1,077	-\$1,925	-64%	\$9,143	-21%	-4%
Company R	2	\$1,913	\$904	-\$1,009	-53%	\$5,007	-20%	-4%
Company S	3	\$1,928	\$504	-\$1,425	-74%	\$7,645	-19%	-4%
Company T	2	\$586	\$92	-\$494	-84%	\$2,930	-17%	-3%
Company U	3	\$1,150	\$278	-\$871	-76%	\$8,510	-10%	-2%
Company V	1	\$278	\$81	-\$198	-71%	\$1,991	-10%	-2%
Company W	1	\$271	\$79	-\$192	-71%	\$2,108	-9%	-2%
Company X	2	\$554	\$119	-\$435	-79%	\$5,455	-8%	-2%
Company Y	1	\$314	\$81	-\$233	-74%	\$10,529	-2%	0%
<b>TOTAL</b>	<b>69</b>	<b>\$58,569</b>	<b>\$17,023</b>	<b>-\$41,546</b>	<b>-71%</b>	<b>\$121,986</b>	<b>-34%</b>	<b>-7%</b>

# Medicare Part D – Reference Price Impact with H.R. 3 1.2 Margin

Company	Number of Drugs	Medicare D Sales 2017 \$US Mil	Change in Medicare Revenue	Medicare D Reference Price	H.R. 3 1.2 x Margin	Change in Revenue	Revenue Reduction as %	Total R&D Spend 2017	Lost Revenue % of R&D	Lost Revenue as 20% of R&D
Company A	1	\$542	-\$385	\$157	\$189	-\$353	-65%	\$361	-98%	-20%
Company B	4	\$3,677	-\$3,100	\$577	\$693	-\$2,985	-81%	\$3,078	-97%	-19%
Company C	5	\$4,400	-\$3,545	\$855	\$1,026	-\$3,374	-77%	\$3,925	-86%	-17%
Company D	2	\$3,952	-\$2,760	\$1,193	\$1,431	-\$2,521	-64%	\$3,274	-77%	-15%
Company E	3	\$1,947	-\$1,604	\$342	\$411	-\$1,536	-79%	\$2,254	-68%	-14%
Company F	2	\$3,197	-\$2,306	\$891	\$1,069	-\$2,128	-67%	\$3,562	-60%	-12%
Company G	6	\$4,643	-\$2,563	\$2,080	\$2,496	-\$2,147	-46%	\$3,734	-57%	-11%
Company H	4	\$3,758	-\$2,903	\$855	\$1,026	-\$2,732	-73%	\$4,894	-56%	-11%
Company I	2	\$2,818	-\$2,235	\$584	\$700	-\$2,118	-75%	\$4,482	-47%	-9%
Company J	4	\$5,591	-\$3,044	\$2,547	\$3,056	-\$2,535	-45%	\$5,472	-46%	-9%
Company K	5	\$3,187	-\$2,541	\$646	\$775	-\$2,412	-76%	\$5,357	-45%	-9%
Company L	1	\$724	-\$514	\$210	\$252	-\$472	-65%	\$1,326	-36%	-7%
Company M	4	\$3,885	-\$3,350	\$536	\$643	-\$3,242	-83%	\$9,818	-33%	-7%
Company N	1	\$462	-\$328	\$134	\$161	-\$301	-65%	\$1,161	-26%	-5%
Company O	1	\$855	-\$553	\$302	\$362	-\$493	-58%	\$1,957	-25%	-5%
Company P	3	\$4,935	-\$3,034	\$1,901	\$2,281	-\$2,654	-54%	\$14,014	-19%	-4%
Company Q	6	\$3,002	-\$1,925	\$1,077	\$1,292	-\$1,709	-57%	\$9,143	-19%	-4%
Company R	3	\$1,928	-\$1,425	\$504	\$604	-\$1,324	-69%	\$7,645	-17%	-3%
Company S	2	\$1,913	-\$1,009	\$904	\$1,085	-\$828	-43%	\$5,007	-17%	-3%
Company T	2	\$586	-\$494	\$92	\$110	-\$475	-81%	\$2,930	-16%	-3%
Company U	3	\$1,150	-\$871	\$278	\$334	-\$816	-71%	\$8,510	-10%	-2%
Company V	1	\$278	-\$198	\$81	\$97	-\$182	-65%	\$1,991	-9%	-2%
Company W	1	\$271	-\$192	\$79	\$95	-\$176	-65%	\$2,108	-8%	-2%
Company X	2	\$554	-\$435	\$119	\$143	-\$411	-74%	\$5,455	-8%	-2%
Company Y	1	\$314	-\$233	\$81	\$97	-\$217	-69%	\$10,529	-2%	0%
<b>TOTAL</b>	<b>69</b>	<b>\$58,569.15</b>	<b>-\$41,545.83</b>	<b>\$17,023.32</b>	<b>\$20,427.98</b>	<b>-\$38,141</b>	<b>-65%</b>	<b>\$121,986</b>	<b>-31%</b>	<b>-6%</b>



# Part D – Reference Price H.R. 3 Impact with Commercial Market

Company	Number of Drugs	Reference Discount	US Total Sales 2017	Revised Total Sales	Revised Total Sales H.R. 3 1.2 Margin	Change In Revenue	Total R&D Spend 2017	Reduction as a % of R&D	Reduction as 20% R&D ratio
Company S	2	73%	\$14,505	\$3,965	\$4,758	-\$9,747	\$5,007	-195%	-39%
Company C	5	77%	\$8,719	\$2,016	\$2,419	-\$6,300	\$3,925	-161%	-32%
Company E	3	83%	\$6,479	\$1,129	\$1,355	-\$5,124	\$2,254	-227%	-45%
Company F	2	73%	\$6,580	\$1,801	\$2,161	-\$4,419	\$3,562	-124%	-25%
Company G	6	57%	\$9,032	\$3,883	\$4,659	-\$4,373	\$3,734	-117%	-23%
Company Q	6	69%	\$6,563	\$2,025	\$2,429	-\$4,134	\$9,143	-45%	-9%
Company D	2	70%	\$6,434	\$1,942	\$2,331	-\$4,103	\$3,274	-125%	-25%
Company K	5	78%	\$5,518	\$1,200	\$1,440	-\$4,078	\$5,357	-76%	-15%
Company H	4	73%	\$6,023	\$1,654	\$1,985	-\$4,038	\$4,894	-83%	-17%
Company B	4	83%	\$4,711	\$779	\$935	-\$3,776	\$3,078	-123%	-25%
Company R	3	74%	\$4,879	\$1,254	\$1,505	-\$3,374	\$7,645	-44%	-9%
Company M	4	84%	\$3,790	\$590	\$708	-\$3,082	\$9,818	-31%	-6%
Company P	3	56%	\$5,655	\$2,506	\$3,008	-\$2,647	\$14,014	-19%	-4%
Company I	2	79%	\$3,400	\$708	\$850	-\$2,550	\$4,482	-57%	-11%
Company U	3	76%	\$3,448	\$844	\$1,012	-\$2,436	\$8,510	-29%	-6%
Company J	4	57%	\$4,834	\$2,057	\$2,468	-\$2,366	\$5,472	-43%	-9%
Company O	1	65%	\$1,331	\$470	\$564	-\$768	\$1,957	-39%	-8%
Company L	1	71%	\$1,133	\$329	\$394	-\$739	\$1,326	-56%	-11%
Company W	1	71%	\$1,120	\$327	\$392	-\$728	\$2,108	-35%	-7%
Company X	2	78%	\$829	\$186	\$223	-\$606	\$5,455	-11%	-2%
Company T	2	85%	\$733	\$109	\$130	-\$602	\$2,930	-21%	-4%
Company N	1	71%	\$826	\$239	\$287	-\$538	\$1,161	-46%	-9%
Company Y	1	74%	\$662	\$171	\$205	-\$457	\$10,529	-4%	-1%
Company A	1	71%	\$666	\$193	\$232	-\$434	\$361	-120%	-24%
Company V	1	71%	\$377	\$109	\$131	-\$246	\$1,991	-12%	-2%
<b>TOTAL</b>	<b>69</b>	<b>72%</b>	<b>\$108,246</b>	<b>\$30,484</b>	<b>\$36,581</b>	<b>-\$71,665</b>	<b>\$120,920</b>	<b>-59%</b>	<b>-12%</b>

# Industry Impact % of Total Annual Earnings (EBIT), 2017 Base

Company	2017 Total Annual EBIT (\$Mil Base)
Company Q	\$17,673
Company G	\$13,529
Company R	\$12,304
Company Y	\$12,287
Company F	\$9,597
Company S	\$9,314
Company U	\$8,999
Company P	\$7,194
Company M	\$6,521
Company J	\$6,201
Company H	\$5,131
Company E	\$5,129
Company C	\$4,453
Company D	\$4,314
Company O	\$2,602
Company I	\$2,559
Company W	\$2,352
Company K	\$2,197
Company X	\$2,186
Company T	\$1,324
Company N	\$1,091
Company B	-\$246
Company L	-\$312
Company A	-\$1,741
Company V	-\$10,386
Total	\$ 124,272

	Revenue Impact	% Reduction
Medicare D Reduction Ways and Means	-41,546	33%
Part D H.R. 3 1.2 Multiple	-38,141	31%
Part D H.R. 3 1.2 Full Market	-71,665	58%

Under H.R. 3, the model anticipates a -\$71.6 Bil annual revenue impact, or a 58% reduction in total annual earnings under the House Ways and Means International Reference Pricing methodology

## H.R. 3 International Reference Pricing – Impact on CA Biopharma Investment

- Methodology: In the Medtrack database, we searched all deals which occurred from October 2009 – 2019 in the U.S. involving Medicare Part D firms that will be impacted by International Reference Pricing
- Those firms invested \$621 billion into Biopharma partnerships, licensing agreements, and acquisitions in the U.S.
- This funding was taken primarily from free cash flow from operations.
- From October 2009 – 2019, 85 California Biopharma firms received \$178 bil of the \$621 bil invested in the U.S., nearly 30% of the total invested
- Of the 85 firms receiving investment above, 25 received marketing authorization for a new product
- With this data, we ran several statistical tests modeling the potential impact for both market access for new medicines and investor behavior/willingness to invest with reductions in revenue due to reference pricing.

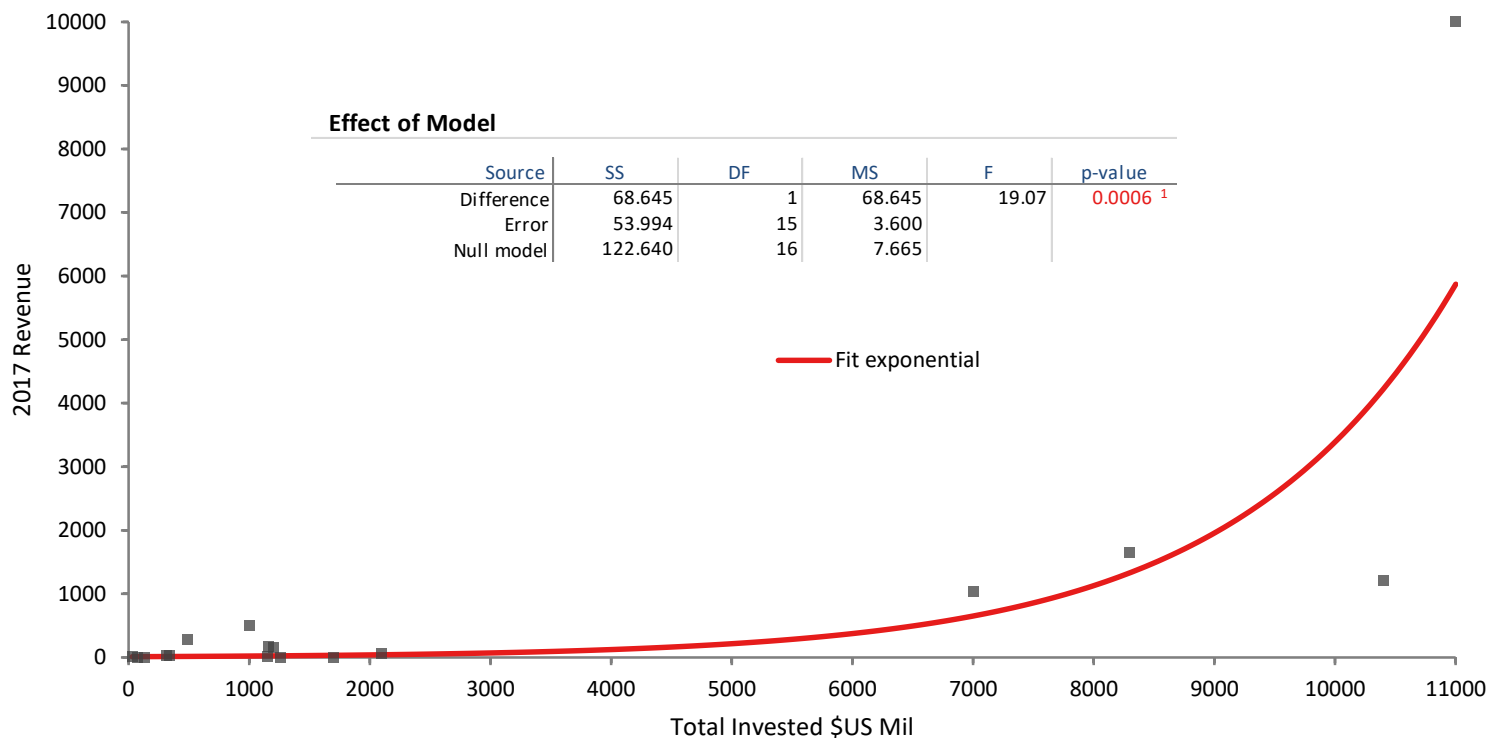
# Biopharma Investors – Relationship to Revenue

Drug Category	Status	Total Invested \$US Mil	2017 Revenue \$US Mil
Respiratory	Marketed	30	12.91
Infectious Diseases	Marketed	46	0
Endocrine, Metabolic and Genetic Disorders	Marketed	75	0.47
Infectious Diseases	Marketed	133.4	1.2
Endocrine, Metabolic and Genetic Disorders	Marketed	315	31
Respiratory	Post Marketing	342.4	34.4
Oncology	Marketed	465	0
Ophthalmology	Marketed	487.5	281
Oncology	Marketed	510	0
Central Nervous System	Marketed	680	0
Oncology	Post Marketing	1000	500
Oncology	Marketed	1000	0
Respiratory	Marketed	1150	16
Oncology	Marketed	1160	175
Oncology	Marketed	1200	149
Hematology	Marketed	1200	0
Musculoskeletal	Marketed	1260	2.4
Endocrine, Metabolic and Genetic Disorders	Post Marketing	1695	5.69
Endocrine, Metabolic and Genetic Disorders	Marketed	2100	56
Endocrine, Metabolic and Genetic Disorders	Approved	2755	0
Endocrine, Metabolic and Genetic Disorders	Marketed	7000	1042
Musculoskeletal	Marketed	8300	1647
Oncology	Marketed	10400	1211
Infectious Diseases	Marketed	11000	10000

- For 25 therapies from small emerging CA biotech firms, we were able to track total investments into a specific product's revenue generation.
- Our products gaining market access required a minimum investment between \$100 mil and \$1 bil, this is the 'ante' needed to sit at the pharma table and determine if the product will succeed or fail, statistically, 9 fail for every 1 success. Many products that come to market with this 'minimum' investment level do not generate meaningful revenue nor ROI.
- The relationship shows conclusively that investors seem to accurately predict and anticipate revenue, i.e. the smaller the investments, the lower the revenue potential of the asset.
- This relationship is highly statistically significant, in that the amount of potential revenue accurately predicts the amount of investment that is made.

# Biopharma Investors – Relationship to Revenue

## Statistical Significance of Investment Size Predicting Annual Asset Revenue



# Biopharma Investors – Impact of Modeling

Drug Category	Status	Total Invested \$US Mil	2017 Revenue \$US Mil
Respiratory	Marketed	30	12.91
Infectious Diseases	Marketed	46	0
Endocrine, Metabolic and Genetic Disorders	Marketed	75	0.47
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Oncology	Marketed	1160	175
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Musculoskeletal	Marketed	1260	2.4
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Infectious Diseases	Marketed	11000	10000

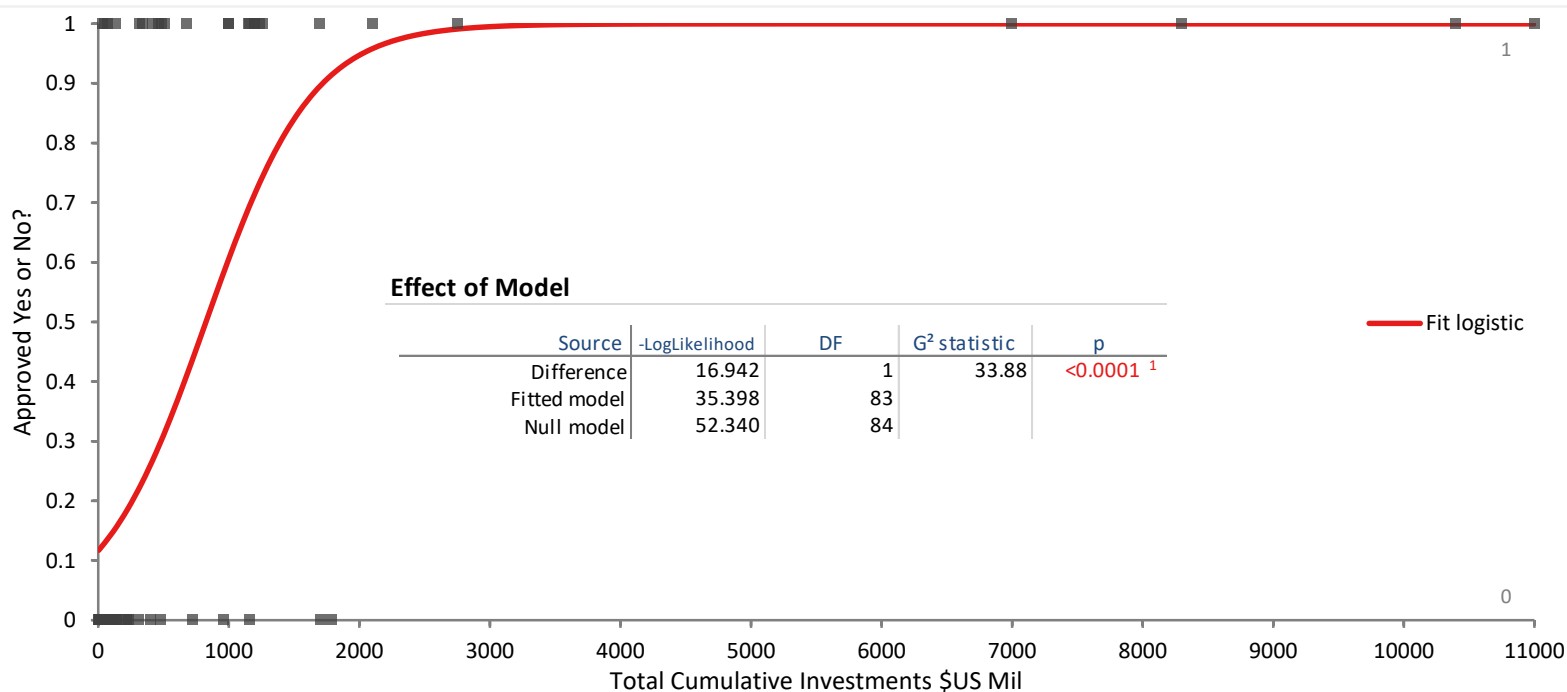
- Based on our model, large revenue reductions will influence which assets classes are ‘investible’.
- Small market indications, early stage platforms with lower revenue potential, or products that risk not breaking even after making the initial ‘ante’, will not be brought to market (i.e. Alzheimer’s and neurological disorders may further be hindered, as will research requiring long-term outcomes [CVD] as well as targeted therapies in smaller indications).
- Investors will dedicate their reduced available capital to those assets with the largest market potential.
- However, investors will still need to ‘ante’ to know which assets have potential. It will still cost hundreds of millions of dollars to fail, so there will be substantially fewer drugs coming to market given the loss of revenue.
- Far fewer of these 25 assets from small, emerging biotech firms will gain market access.

# Investments Predicting Market Entry

- Given the rate of success in biopharma market entry is a constant, 8% success, 92% failure, any reduction in revenue will mean that a firm will need to make fewer investments in proportion to their drop of free cashflow.
- Using a logistic regression, we have modeled the probability of our 85 products from small emerging biotech firms from 2009-2019 gaining market entry based on the total investment they received; the total amount received is a statistically significant predictor of successful market entry.
- We then look at the impact of revised revenues on the probability of market entry, and the decision to invest in the same cohort assuming two scenarios, the House Ways Means impact on Medicare Part D only, and the full impact on the commercial market adding in a 1.2 margin in H.R. 3.
- We find that H.R. 3 will reduce market entry from 25 products from emerging CA companies to 3, all things being equal and with a 58% drop in free cashflow.

# Investments Predicting Market Entry

Amount of Cumulative Investments is a Statistically Significant Predictor of the Approval of New California Biopharma Products from Emerging Biotech



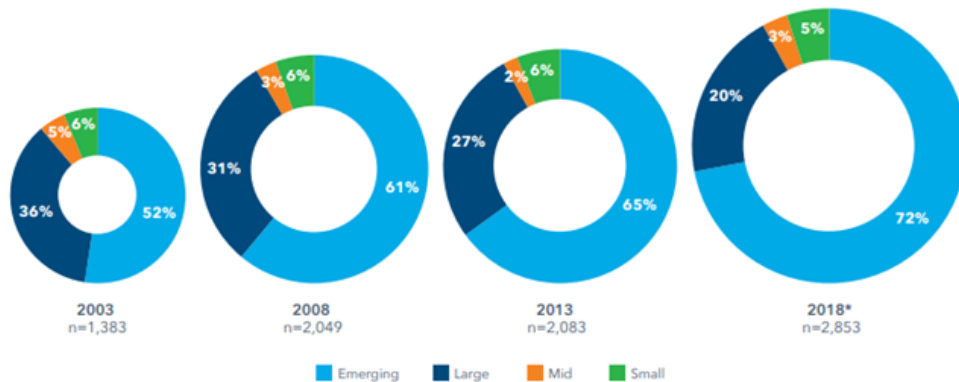


# Revised Probability of 25 CA Therapies Coming to Market

Asset Type	Total Investment (\$56 bil)	Current Probability	Ways and Means Revised Revenue (\$36 bil Available Capital)	H.R. 3 Revised Revenue (\$23 bil Available Capital)
Infectious Diseases	\$11,000	100.00%	100.00%	99.99%
Oncology	\$10,400	100.00%	100.00%	99.98%
Musculoskeletal	\$8,300	100.00%	100.00%	99.87%
Metabolic and Genetic Disorders	\$7,000	100.00%	99.99%	99.48%
Endocrine, Metabolic and Genetic Disorders	\$2,755	99.14%	92.31%	69.90%
Endocrine, Metabolic and Genetic Disorders	\$2,100	95.85%	80.42%	54.01%
Endocrine, Metabolic and Genetic Disorders	\$1,695	89.51%	67.91%	43.51%
Musculoskeletal	\$1,260	74.52%	50.93%	32.87%
Cardiovascular	\$1,240	73.58%	50.11%	32.41%
Oncology	\$1,200	71.62%	48.47%	31.51%
Hematology	\$1,200	71.62%	48.47%	31.51%
Oncology	\$1,160	69.58%	46.84%	30.61%
Respiratory	\$1,150	69.06%	46.43%	30.39%
Oncology	\$1,000	60.68%	40.41%	27.19%
Oncology	\$1,000	60.68%	40.41%	27.19%
Central Nervous System	\$680	41.26%	28.65%	21.11%
Hematology	\$510	31.61%	23.31%	18.32%
Oncology	\$465	29.27%	22.02%	17.63%
Oncology	\$415	26.79%	20.64%	16.88%
Respiratory	\$342	23.44%	18.76%	15.85%
Endocrine, Metabolic and Genetic Disorders	\$315	22.25%	18.09%	15.47%
Infectious Diseases	\$133	15.47%	14.09%	13.16%
Endocrine, Metabolic and Genetic Disorders	\$75	13.69%	12.97%	12.48%
Infectious Diseases	\$46	12.86%	12.45%	12.15%
Respiratory	\$30	12.43%	12.16%	11.97%
<b>BRING TO MARKET</b>		<b>DO NOT BRING TO MARKET</b>		

# Emerging biopharma companies now account for over 70% of the total R&D pipeline

Exhibit 9: Percent of Late-Stage Pipeline by Company Segment



Source: IQVIA Pipeline Intelligence, Apr 2018; IQVIA Institute, Mar 2019

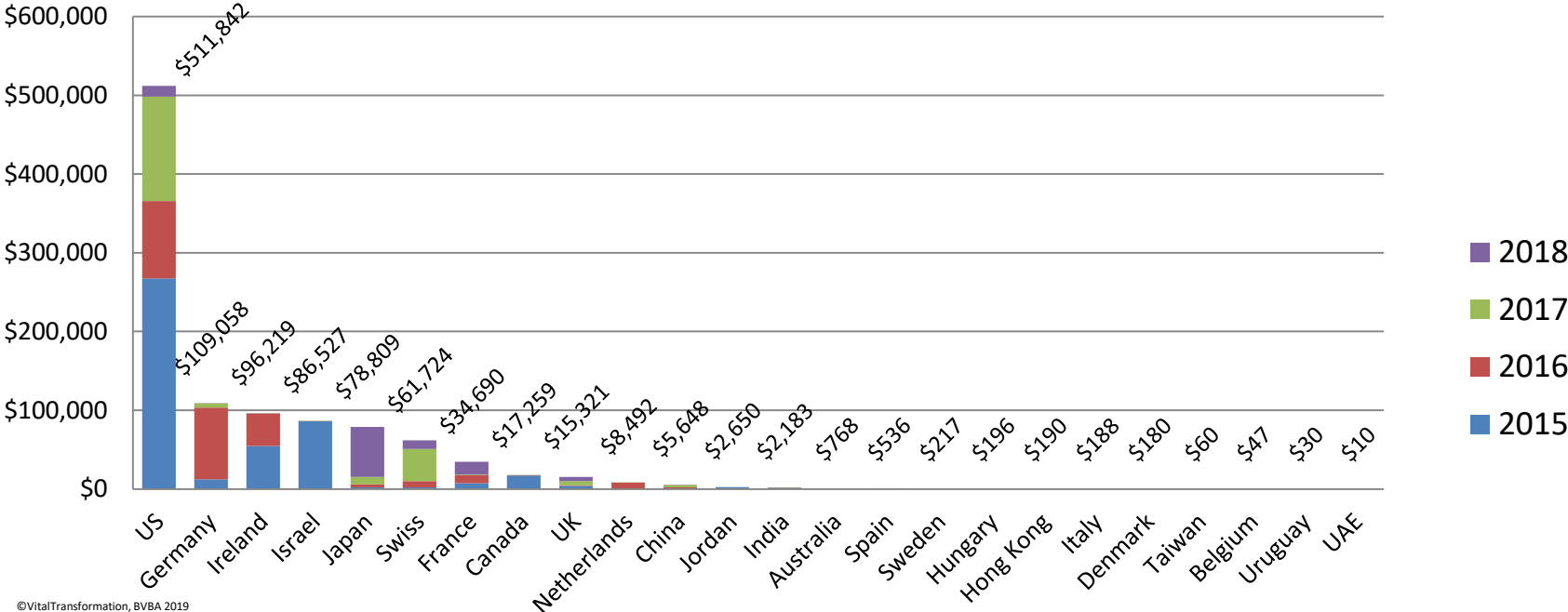
Source: IQVIA Pipeline Intelligence, Apr 2018; IQVIA Institute, Mar 2019

- In 2018, 59 new active substances (NAS) were launched, higher than any of the past 5 years.
- 27% were to treat cancer, 20% were for infectious diseases, almost half received orphan drug designation, and over a third were first-in-class.]
- 38 (almost 2/3) were patented by emerging biopharma companies (EBP), and 74% of those were also registered by EBP companies.
- The 2018 group of new drugs launched still took a median of 13.6 years from the time of first patent filing to launch.

# BIOTECH M&A BY BUYING COUNTRY, 2015 - 2018

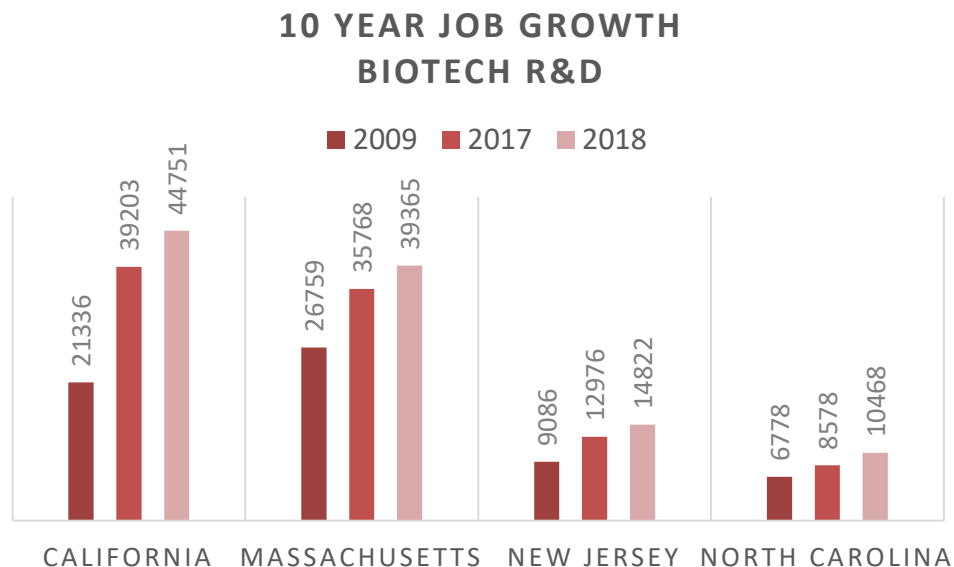
\$US Millions

In order to commercialize, international biotech is locating to the US. This chart shows that, over the last 4 years, 70% of all global biotech IP in mergers and acquisitions are being acquired by US interests.



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<https://www.thepharmaletter.com/article/an-all-time-record-year-for-pharma-biotech-m-a>  
<https://www.thepharmaletter.com/article/volume-and-value-of-pharma-biotech-m-a-slowed-down-in-2016>  
<https://www.thepharmaletter.com/article/pharmaceutical-m-a-deals-in-2017>  
<https://www.thepharmaletter.com/article/pharmaceutical-m-a-deals-in-2018>

# Biopharma – A U.S. Innovation Growth Engine



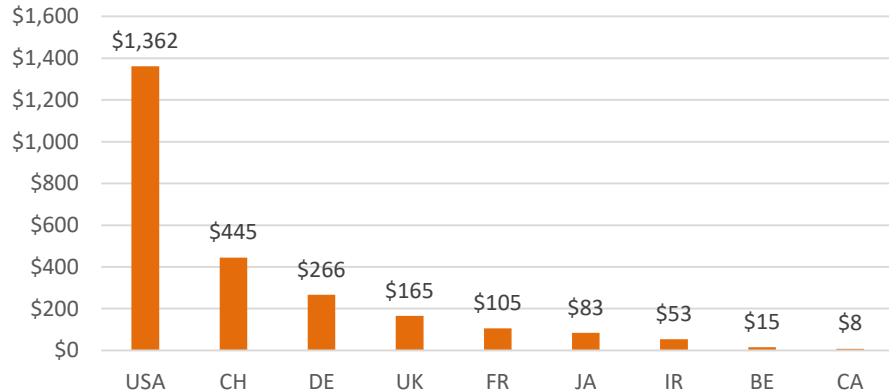
The Biopharma sector is growing organically as well as through capturing emerging international companies to move to the US to commercialize. This growth will be curtailed by a revenue reduction of 58%.

Source: MassBIO, U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW)

# International Reference Pricing Overwhelmingly Impacts US Shareholder Value

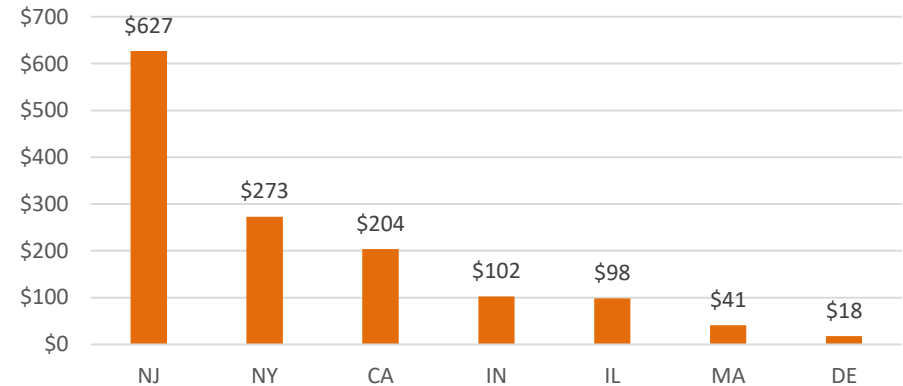
## Medicare Part D

International Reference Pricing Companies  
Market Capitalization By Country \$US Bil



## US Market Capitalization

State Corporate Headquarters  
Medicare Part D Impacted Firms \$US Bil



A cut of 58% of BioPharma revenue will likely result in a reduction in excess of \$500 billion in the Market Capitalization of US firms

# Key Messages

- By applying International Reference Pricing to Medicare Part D pricing reductions will not be contained to the Medicare Part D market, they will impact the entire US market.
- A reduction of \$72 bil a year in industry revenue (House Ways and Means, CBO, and Vital Transformation's estimate) represents a reduction of 58% of annual net revenue, and will reduce the number of drugs coming from small, innovative emerging biotech that came to market from 25 to 3 over a 10 year period in California alone.
- Whilst California is the largest single US Biopharma market receiving nearly 30% of all investments into small, innovative biotech firms, other markets will see large reductions in the number of new drugs coming to market in direct proportion to that seen in California
- New therapies require between \$100 mil and \$1 bil in cash to determine if they are marketable, and will fail over 90% of the time during clinical trials. The majority of marketable assets will no longer be viable with a 58% reduction in revenue and will not come to market.
- The United States now dominates the global Biopharma sector, with 70% of global Biopharma intellectual property being owned and developed in America. This has lead The Biopharma sector in the US is growing organically as well as capturing international Biopharma IP for the US to commercialize. This will be curtailed by a revenue reduction of 58%.