

REGENERON

Krause Fund Research

Regeneron Pharmaceuticals, (NASDAQ: REGN)

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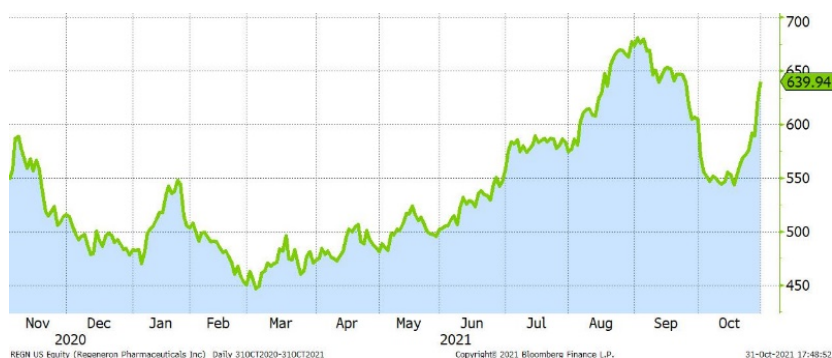
Drivers of Thesis

- **Diverse Pipeline:** Regeneron boasts a diverse pipeline that includes cancer drugs, allergy medication, and blood pressure drugs. Specializing in multiple drug categories allows Regeneron to further penetrate the pharmaceutical market and diversify revenue.
- **Patented VelociSuite Technology:** Regeneron's VelociSuite is a patented group of technologies designed to streamline the research and development process. VelociMouse for example allows for the rapid editing of mice DNA. These technologies allowed Regeneron to be one of the first on the market with a solution to COVID-19.
- **Monoclonal Antibodies:** Regeneron's primary research involves monoclonal antibodies which mimic the body's natural immune response. This science is at the forefront of drug development and has been hypothesized to revolutionize medicine as we know it. Drugs for cancer, allergies, tumors and other rare diseases are being developed using this new science.

Risks of Thesis

- **Patent Expiration:** Due to the nature of the pharmaceutical industry, drug patent expirations have a significant impact on revenue. Regeneron's patent on Eyelea will expire in 2027. We believe that by that time, a drug in Regeneron's pipeline or one currently in the portfolio will replace the revenue lost. This assumption is built into our CV of NOPLAT.
- **Global COVID-19 Resurgence:** While we don't project complete extermination of the COVID-19 virus, we do expect the end of lockdowns and other restrictions in the near future. Sales of Regeneron's REGN-COV drug reflect this. Should a massive outbreak occur, sales are likely to remain inflated thus exceeding our price target.

One Year Performance



Rating: **HOLD**

TARGET PRICE: \$641 - \$689

DCF Price	\$641
2021 Relative P/E	\$1075
2022 Relative P/E	\$642

Price Data

Current Price	\$631
52 week High	\$686
52 week Low	\$441

Key Statistics

Shares Outstanding	105.1 m
EPS (TTM)	\$51.11
Market Capitalization	\$68.45 b
EPS (TTM)	\$51.11
P/E Ratio	12.52
Current Ratio	3.63
Debt to Equity	55.67%

Profitability

ROA	34.6%
ROE	51.3%
Sales	5,567.6 m

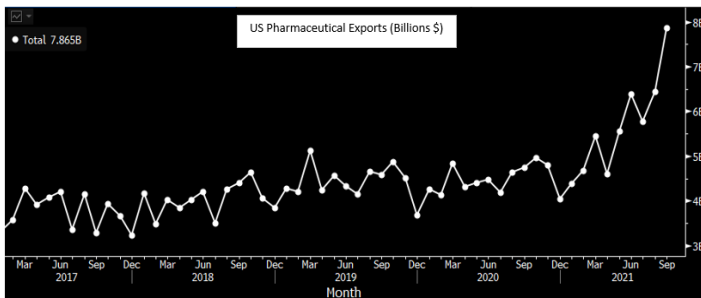
Company Description

Regeneron Pharmaceuticals, Inc is a biotechnology company headquartered in Tarrytown, NY. The company boasts nine FDA-approved drugs for a variety of serious illnesses. The company is a leader in monoclonal antibody research which allowed them to rapidly develop REGN-COV, a COVID-19 antibody cocktail that has been approved for emergency use.

Economic Outlook

Pharmaceutical Exports

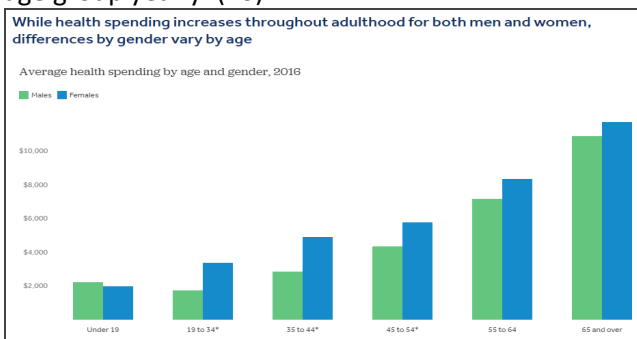
US pharmaceutical exports have seen significant growth over the last year due to the COVID-19 pandemic. Many US bio-tech companies have overseas manufacturing and distribution centers. However, in order to operate overseas, infrastructure and stability must be present to get an operation up and running. In third world countries this might not be possible, which is why many medical supplies that make it to remote parts of the world originate in the US. COVID-19 has impacted this concept significantly, with pharma exports skyrocketing over the last year. We project these pharma exports to continue to grow as global vaccination rates rise. We expect 7.3% growth quarter over quarter in the following two quarters and 5.1% year over year throughout our forecast. The implications this has on REGN are significant, as they are one of the few suppliers of COVID-19 prophylactics.



(Bloomberg Terminal)

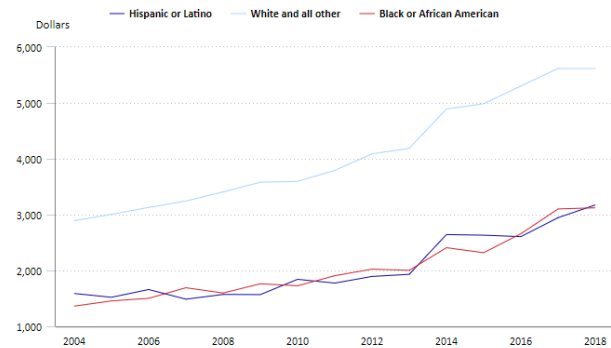
Demographics

Using demographics can help Regeneron target groups of people that need more healthcare and are willing to spend more on healthcare. As people get older, they spend more money on healthcare. People 65 years or older spend on average about \$3000 more than the next age group yearly. (10)



(Health System Tracker)

This could be spending more on medicines, assisted living, or just basic medical needs. Not only do aging people need healthcare, but all ages will utilize healthcare at some point. People on average have started to increase healthcare spending over the past 20 years. People are becoming more aware of their health especially since the start of the COVID-19 pandemic began. Increased healthcare spending stands as an opportunity for Regeneron to capture the growing demand. Also, the population of the world increases year over year. It is said that population is growing at about 1.05% a year.(14)

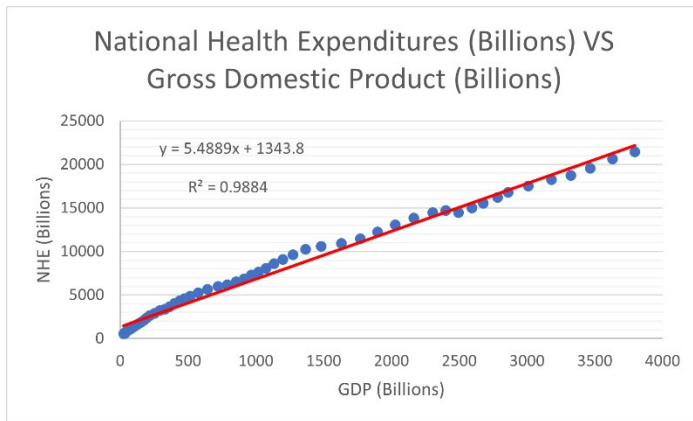


(Chalise, L. Healthcare expenditures)

Due to the increase in healthcare spending across all ethnicities and economic backgrounds, a growing elderly population, a growing general population, and post covid healthcare utilization surges, we predict that healthcare utilization and spending will increase by 8% in the next 12 months and will stabilize at 5.5% growth over the following 3 years.

GDP

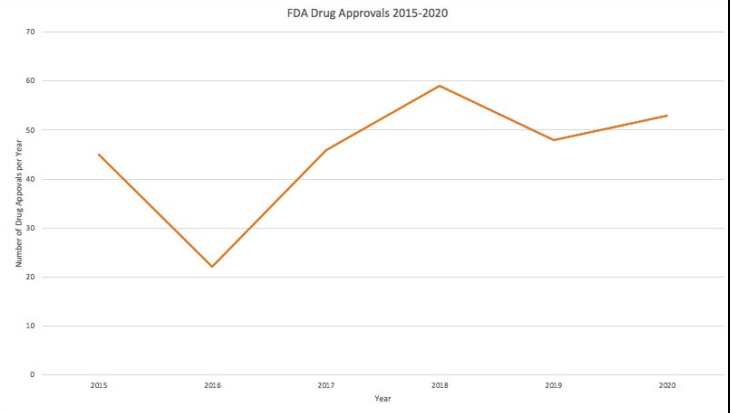
The COVID-19 pandemic stagnated GDP growth at unprecedented levels. However, the gradual reopening of the US in the past year combined with economic stimulus boosted GDP to pre-pandemic highs around June of 2021 at 12.2% growth YOY (1). While this accelerated growth has slowed down as of recent, we expect YOY GDP growth to remain consistent at 3.3% for our forecasted period due to continued reopening. We do not suspect further lockdowns due to the efficacy of vaccines and continuing vaccination of the glob GDP plays a significant role not only for REGN but the healthcare industry. Our regression below highlights the relationship between GDP and health expenditures, with an R squared of 0.98. The implications of rising health care expenditures associated with GDP will benefit Regeneron by boosting sales and margins.



Industry Analysis

FDA Approval

Food and Drug Administration (FDA) approval of drugs/medicines is essential to success in the Global Biotech industry. This has become even more prevalent as the US emerges from the COVID-19 pandemic. The discussion around FDA approval has become intertwined with public acceptance of a new drug/treatment. Along with public acceptance, there is evidence that investors adjust their expectations for a company throughout the approval process both positively and negatively (15). While the FDA does not have a set number of drugs to approve every year, they are trending upwards in number of drugs approved every year. Below is a graph showing the number of drug approvals per year since 2015.



(FDA)

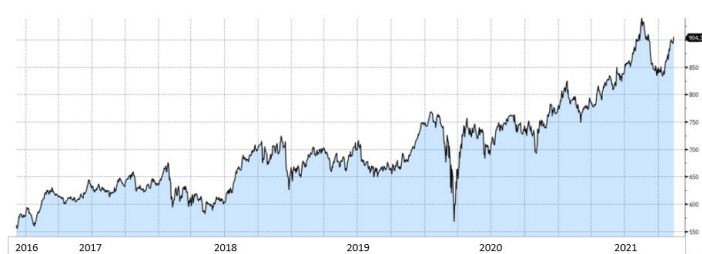
So far in 2021 the FDA has approved 42 drugs (2). Due to the upward but contained trend, we predict that next year the FDA will approve 50-55 (0-3% growth) new drugs. As the US continues past the impacts of COVID-19, we expect the number to continue trending upward. In two years (2023), we predict that the FDA will approve 65+ (22%+) drugs for use in the US. While an increase in approvals will open the door for all drug/medicine manufacturers, we feel confident in Regeneron's ability to seize this opportunity. Regeneron currently boasts 10 drugs in Phase 3 of the FDA approval process (12) which is the final phase before FDA review.

Industry Description

Operators in the Global Biotechnology industry primarily use living organisms or molecular and cellular techniques to develop products that are used in agriculture, food, industrial and medicine production. (8) The industry is made up of multiple different branches, but the biggest branch is human health technologies which makes up about 55.6% of the industries revenue. The other sectors are Agricultural and Environmental Technologies (19.4%), Industrial Technologies (10.6%), Animal Health Technologies (7.8%) and other smaller sectors (6.6%) (8). These companies are similar in the sense of what makes them successful. The keys to having a successful company in this industry is the ability to innovate, raise funds for research and development, and ability to get highly skilled professionals to work for you.

Innovation allows for a company to set themselves apart from their competitors competing in the same market. Innovation can be adopting new technology or creating new technology to help streamline processes which will give the company competitive advantage. Research and development costs are expensive and essential to the success of a Biotechnology company. Average R&D

expenses can reach up to \$1.9 billion dollars (8). Successful research is time consuming and intensive so the ability to raise capital to fund projects is vital to success. Like any other company getting the right group of people to work for you is a necessity to be successful. Attracting qualified and motivated works that want to make a difference is a way that companies can separate themselves from other competitors.

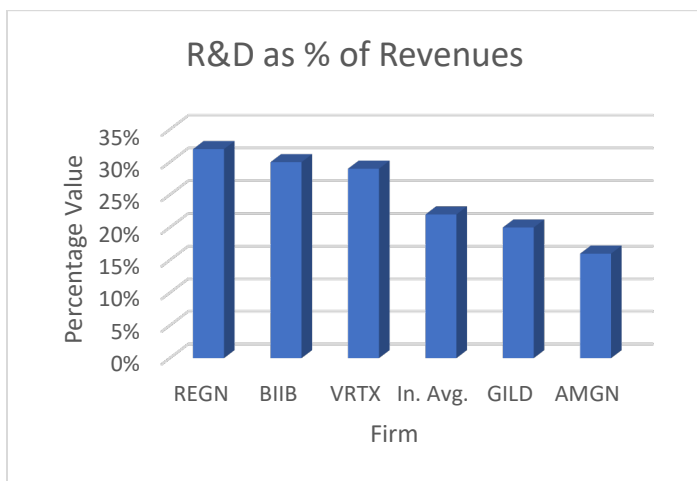


(Bloomberg Terminal)

Illustrated in the graph is the growth of the whole healthcare industry. Strong growth in the past couple years can be attributed to the pandemic, but also can poise for positive future growth.

Research and Development (R&D)

R&D is an integral part of operations within the Global Biotech industry. Plain and simply put, these companies can neither continue their current operations nor expand into new projects without intense R&D spending. This is an area where larger, cash-rich bio-tech companies can create a large advantage between them and their competitors. To better compare across industry peers with varying sizes, a chart is provided below showing R&D spending as a percentage of sales for Regeneron and five peers.



(Bloomberg Terminal)

As seen in the accompanying model, we predict Regeneron's R&D spending as a percentage of sales to increase next year to 25%. After that we anticipate a slight decrease followed by steady growth long-term. Our projected growth will keep Regeneron ahead of the current industry average of 22% (8). This will ideally allow the company to outpace its competitors in terms of future R&D output.

Porter's Five Forces

1. Competition

Competition in the global biotech industry can vary widely and is usually on a drug-by-drug basis rather than firm-by-firm. Due to the nature of their business, securing a patent is crucial in order to generate revenues. Unlike other industries, simply charging a lower price than the competitor will not guarantee more sales. Since doctors are the ones prescribing these medications at the end of the day, the efficacy of the drug itself rather than the price is ultimately what drives sales. How much is invested into research and development is what ultimately differentiates firms.

2. Threat of New Entrants

The threat of new entrants in the global biotech industry is relatively high and will likely increase (8). Despite the high research and development costs associated with creating a successful drug, many small startups are able to leverage their intellectual assets to secure funding, whether it be from a university or the public. A recent trend in the industry has been to outsource much of the research and development to larger biotech companies, like efficacy and safety trials. This allows startups to save money and alleviate some of the heavy lifting of the development pipeline.

3. Power of Suppliers

We consider the power of suppliers in this industry to be relatively low. Much of the raw input that is used in the research and development process includes basic chemical compounds that can be easily purchased anywhere in the world. Suppliers have little room to raise prices mainly because their products are not unique by design. The Chinese chemical industry for example, which accounts for 40% of the global chemical market, provides cheap products to a variety of industries (6). If US-China relations sour, companies in this industry could be forced

to purchase more expensive US or European made chemicals.

4. Power of Customers

The power of customers in this industry is extremely low due to the nature of the products. Consumers often have no choice when it comes to prescription drugs, especially if the drug treats a rare condition or if all other treatments have been exhausted. As mentioned before, doctors are the ones who are giving these drugs out, and which one they choose comes down to efficacy and the patient's situation.

5. Threat of Substitutes

The threat of substitutes in the biotech industry varies from drug to drug. For drugs that treat more common ailments, substitution can be a major threat. Often, doctors will test how a patient responds to a new medication. If the patient responds well and is getting better, they will continue treatment. However, if it is ineffective or causes unwanted side effects, the doctor will substitute it with another drug. For drugs that treat less common ailments, treatment options can be limited or even non-existent in certain cases.

Recent Developments/Trends

The Global Biotech industry has evolved rapidly during the past couple of years, largely in part due to the COVID-19 pandemic. One of the most impactful societal changes that the US has seen, is a demand for accelerated development and approval of drugs (5). The demand is so large that the US government has provided grants to some bio-pharmaceutical companies to expedite their work (5). This will certainly help the industry over the next few years.

Due to improved drugs, medicines, and treatments, populations around the globe are seeing rising life expectancies. This should benefit the industry two-fold, as higher life expectancies lead to higher populations overall, but especially within the elderly, which is a highly targeted population within global biotech. Over the past five years specifically, there has been increased focus on developing products for older adults, as 3.6% of adults are now aged 65+, which is an increasing number (14).

Competitors

Competitors in this industry compete more for new drug approvals and sales within a market segment that they have a drug for. There are many companies within this industry, but all vary widely by size. There are a multitude of smaller startup companies that come in and try to gain market share by being more efficient than the giants of the industry. These companies once successful or getting an FDA approval are quickly acquired by one of the bigger companies in the industry. About 60% of the competitors are large companies while 40% are smaller companies (8). Competitors try to differentiate themselves from one another by being more efficient via technology, adapting quicker, R&D, and intellectual workers.

Companies	Mkt Cap(Millions)
JOHNSON AND JOHNSON	436,439.00
MODERNA INC	181,391.00
AMGEN INC	121,378.00
GILEAD SCIENCES	89,007.00
REGENERON PHARMACEUTICALS	69,573.00
VERTEX PHARMACEUTICALS	48,920.00
BIOGEN INC	44,681.00
SEAGEN INC	27,564.00
HORIZON THERAPEUTICS	24,337.00
ROYALTY PHARMACEUTICALS	23,364.00
ALNYLAM PHARMACEUTICALS	22,527.00
NOVAVAX INC	18,038.00
INCYTE CORP	15,705.00
BIOMARIN PHARMACEUTICALS	14,297.00
GUARDANT HEALTH	13,076.00
MARAVAI LIFESCIENCES	12,130.00

(Bloomberg Terminal)

Company Analysis

Company Overview

Regeneron Pharmaceuticals, Inc (NASDAQ:REGN) is a biotechnology company headquartered in Tarrytown, NY. The firm has recently expanded an international presence by setting up locations in Ireland to help with distribution and R&D projects. Regeneron was founded in 1988 and it has seen tremendous success in the biotech industry. The company boasts nine FDA-approved drug treatments for a variety of serious illnesses. Regeneron has seen increased time in the spotlight since the beginning of the COVID-19 pandemic, as the company has developed one of the

leading non-vaccine treatments for the virus. Scientists at Regeneron are leaders in the field of antibody research, which is becoming widely accepted as the next frontier for drug development. The rapid production of the REGN-COV antibody cocktail as well as its subsequent emergency approval are indicative of Regeneron's capabilities.

Collaborations

Regeneron has partnered with Bayer, Sanofi, Zai Lab, and other firms to help promote international sales and to grow market capitalization beyond the United States. Bayer is headquartered in Germany, and Sanofi is headquartered in China. These two strong markets, within the European Union and the Asian continent, position Regeneron well for increased sales. These companies work closely together on drug development as well. Some of Regeneron's drug partnerships are listed below.

-Bayer (Germany) – development and commercialization of Eylea

-Zai Lab (China) – develop and commercialize odronextamab in China

-Alynlam (USA) – discover RNA therapies for NASH and other related diseases

There have been no big mergers or acquisitions in the history of the company.

Pipeline Highlights

Regeneron has a handful of promising drugs within their pipeline. The pipeline has a 3-phase process that represents end to end research and development. Some examples of drug currently in the pipeline are:

-REGN5668 & REGN4018: **Phase 1**, ovarian cancer(12)

-REGN5381: **Phase 1**, Heart failure(12)

-REGN5093: **Phase 1**, Advanced non-small cell lung cancer(12)

-DUPILUMAB: **Phase 2**, Peanut and grass allergy (12)

-POZELIMAB: **Phase 2**, Protein-losing enteropathy(12)

-CEMIPILIMAB: **Phase 3**, First-line non-small cell lung cancer (NSCLC) chemo combination, second-line cervical cancer, adjuvant CSCC(12)

-FASINUMAB: **Phase 3**: Osteoarthritis pain of the knee or hip(12)

-REGN1908-1909: **Phase 3**: Cat allergy(12)

These new drugs are shaping the future of Regeneron and helping people around the world. These drugs and the illness they treat opens many doors to new markets for Regeneron to grow sales.

SARS-CoV-2 Antibody Cocktail

Casirivimab and Imdevimab, also known as SARS-CoV-2 Virus Multi-Antibody Therapy is a monoclonal antibody COVID-19 prophylactic. The drug is currently authorized for emergency use on hospitalized patients to prevent further disease progression (9). Its use for non-hospitalized patients is currently in phase 2 of their pipeline. The first few quarters of 2021 display high sales for the drug, as its life saving capabilities continue to drive demand. Although it has achieved major success this year, we believe sales will eventually taper off as vaccination rates rise over the forecasted period

Monoclonal Antibody Medicines

Regeneron's research primarily involves the use of monoclonal antibodies which essentially replicates the body's natural immune system. This type of medicine is becoming increasingly studied and is being used to treat anything from peanut allergies to cancer (6). Regeneron is at the forefront of this science and by utilizing the Velocisuite technology, Regeneron will continue to be pioneers in this growing field.

Company Technology

Regeneron uses its patented *Velocisuite* technology to significantly expedite research and development. Regeneron found that their new drug creation/approval process was seriously hindered by various bottlenecks in the process. Many of the early stages in drug development (i.e. identifying target DNA and treatments for it) are long and arduous. The *Velocisuite* program allows for expedited manipulation of DNA in testing, which allows for much faster discovery of solutions to both genetic and non-genetic diseases. Because this technology is patented, Regeneron is the only biotech

company with this kind of capability. This is a huge competitive advantage in terms of their ability to maximize R&D spending, and we think it is a reason that Regeneron will seize any opportunity that could potentially come from future increases in FDA drug approval.

In 2019, Regeneron opened a new, \$800 million fill/finish facility in New York's Capital Region (near Albany). The 350,000 square foot, state-of-the-art facility features fully automated drug product manufacturing systems as well as automated inspection, assembly, and packaging systems. The facility will allow Regeneron to increase its manufacturing capacity while also adding new job opportunities.

As briefly touched upon in earlier sections, Regeneron has developed and continues to develop drugs across a wide range of diseases and sicknesses. Some are genetic issues, some aren't, some are a combination. Regeneron has proven their ability to diversify greatly within the same industry (11).

Valuation Analysis

Valuation Methodology

The target price and accompanying forecasted financials were produced from meticulous examination of past, current, and future market trends. The price was also derived using industry, peer, and firm-specific information. The combination of these factors allowed the analyst team to forecast future expected performance of Regeneron. From there the team calculated a variety of valuations, which are discussed in this section.

Revenue Decomposition

Regeneron's revenue comes from their product sales and the collaboration agreements they have with other pharmaceutical companies. Product sales is the amount that Regeneron sells themselves while the collaboration revenue is the portion, we earn from sales the other companies make.

One of our leading products is Eylea. This drug has made up of about 50% or more of our total revenues. In the year 2027 the patent for this drug will expire and the revenue from this drug will taper off substantially. This drug also is sold by our partner Bayer which is represented in the "Bayer Collaboration Revenue."

Toward the end of our 5-year forecast we believe that the sales will begin to slow when it gets closer to the expiration year. (13)

Libtayo is a new and promising drug for the future. It began to be sold in 2018 when it was first approved and introduced into the market. This skin cancer treatment has high potential because of the lack of competition. We forecasted growth in 2021 to be 40% and similar but lower growth in the following years. (1)

Arcalyst is another drug with an upcoming expiration date. This drug has produced minimal sales over the past 10 years. We forecasted that this drug will not have any effect by the year 2021. (13)

Evkeeza is a brand-new drug that has just begun to produce a return this year. This drug has the ability to make up for the loss of sales from eth expiring Eylea and this patent expiration is not until 2035. We choose to grow this cholesterol fighting drug at 200% in years 2023, 2024, and 2025. (1)

Praluent, we believe will have modest and continuous growth in the next 5 years. This is because of the aging population. This is a heart failure drug that will be needed as people age. (1)

REGN-COV2 is a new COVID-19 antibody cocktail that helps people that have already had the virus and can help decrease the seriousness of symptoms in the future. We forecast tremendous growth in the first year of sales but then as people around the world get vaccinated, we believe that the sales will no doubt decrease substantially. (9)

Our collaboration revenue from Sanofi and Bayer is another revenue source. Sanofi collaboration revenue will increase because they drug that Sanofi sells are not approaching the expiration date but for Bayer it is a different story. Bayer sells Eylea and when that drug expires then the growth of that collaboration revenue will decrease. Similar to our forecast for our own Eylea sales, we take the same approach towards Bayer's collaboration revenue. The closer to the expiration date the lower the growth.

Cost of Equity

Cost of Equity was calculated using the CAPM formula. The risk-free rate is the current YTM on the 10-year treasury. The beta is the two-year, weekly, raw beta from

Bloomberg. Finally, the equity risk premium is the ERP from Aswath Damodaran of the Stern School of Business at New York University.

Cost of Debt

Cost of debt was calculated using the same risk-free rate as the cost of equity, the current YTM on the 10-year treasury. The pre-tax cost of debt is the current YTM on a 10-year Regeneron corporate bond. Combined with a 20.10% marginal tax rate, we found the after-tax cost of debt to be 1.95%. The marginal tax rate was computed by finding Regeneron's implied marginal tax rate over the past ten years. The tax rates for the past three years were then averaged for the final number. Only the past three years were used since Regeneron's tax rate dropped significantly after the 2017 Tax Cuts and Jobs Act.

Weighted Average Cost of Capital

In our model we calculated an estimated 8.61% weighted average cost of capital (WACC). This was calculated by adding the cost of equity and debt combined with their market value weights. Equity makes up 96.12% of the firm's market value and debt makes up the remaining 3.88%.

Research and Development

On average the research and development expenditures are about 22% of the companies' sales in the Biotech industry. Regeneron however averaged about 25-30% of their sales on R&D. We decided to grow our R&D expense by 20-25% of sales for the next 5 years besides 2021. In 2021 we forecast a huge increase of sales due to the anomaly of the REGN-COV2. We decided to drop the percent of sales number because this is not a normal occurrence in this industry. Just because in one-year sales are extraordinarily high that does not mean that Regeneron would throw that much more money into R&D.

Discounted Cash Flows

In our DCF we came up with an implied price today of \$641.07. We got this number by finding our free cash flow from each forecasted year by taking NOPLAT and subtracting our change in invest capital from each year. Then we discounted our FCF by our WACC of 8.61% to find the present value of each value. We took the sum of the present values and did our non-operating adjustments to get the value of equity of our company. Taking the

outstanding shares and dividing by that will get our intrinsic value today. We believe that this is a more accurate representation of the implied price of today and should be considered more than the dividend discount model.

We suggest a HOLD rating because the implied price of today is only about 1-2% higher than the current quoted price. Although we calculated that Regeneron is undervalued our intrinsic value is too similar to the quoted price to give it a BUY rating.

Dividend Discount Model

Our Dividend Discount Model (DDM) yielded a target price of \$513.86 which sits 19.85% below our DCF and EP target of \$641.10. While the DDM target is not an unreasonable number, we do not find it to be a useful model for Regeneron, as the company does not pay a dividend. In addition, Regeneron has clearly stated that they have no future to pay a dividend, so an estimated dividend payment was not used in the calculation.

Relative Valuation

The relative valuation model compares Regeneron to seven other industry competitors. The companies, all US-based companies, were chosen due to their similar market capitalization size compared to Regeneron. Additionally, Pfizer and Moderna were compared as well, due to their shared growth in exposure with Regeneron during the COVID-19 pandemic. EPS was used to derive the P/E ratio across all the firms.

Regeneron shows much stronger EPS than all the compared firms. In turn Regeneron shows an estimated P/E ratio of 9.6 in 2021 and a 12.8 estimation in 2022. Both numbers are lower than the peer evaluation averages, which were 16.25 and 13.02 respectively. This tells us that Regeneron could be seen as a value stock by investors.

All prices of compared firms are current as of Friday, November 12, 2021, after market close.

Sensitivity Analysis

CV Growth of NOPLAT

One of our most sensitive variables is the CV of NOPLAT. We went with a conservative estimate of 2%, however the table below shows how much the price can vary relative to CapEx spending.

		CapEx as % of total Rev							
		\$	5.68%	6.68%	7.68%	8.68%	9.68%	10.68%	11.68%
CV Growth of NOPLAT	3.50%	641.07	808.89	799.79	790.69	781.56	772.50	763.40	754.30
	3.00%		751.47	743.12	734.77	726.38	718.06	709.71	701.35
	2.50%		703.45	695.72	687.99	680.23	672.54	664.81	657.08
	2.00%		662.70	655.50	648.30	641.07	633.90	626.70	619.50
	1.50%		627.68	620.93	614.19	607.42	600.70	593.96	587.21
	1.00%		597.26	590.91	584.56	578.19	571.86	565.51	559.17
	0.50%		570.59	564.59	558.59	552.56	546.58	540.58	534.58

Our analysis shows that raising CapEx relative to CV of NOPLAT hurts the share value.

Beta vs Equity Risk Premium

		Beta								
		\$	641.07	1.17	1.27	1.37	1.47	1.57	1.67	1.77
Equity Risk premium	5.23%		772.24	704.59	647.31	600.02	555.60	518.31	485.40	
	5.13%		789.09	719.96	661.45	613.15	567.78	529.71	496.10	
	5.03%		806.64	735.98	676.18	626.82	580.46	541.57	507.24	
	4.93%		824.96	752.69	691.54	641.07	593.69	553.93	518.85	
	4.83%		844.09	770.13	707.56	655.94	607.48	566.83	530.96	
	4.73%		864.08	788.35	724.31	671.48	621.89	580.30	543.61	
	4.63%		884.99	807.41	741.82	687.72	636.95	594.38	556.82	

The following table illustrates the the sensitivity of our beta and the equity risk premium. Our equity risk premium is based off Damodoran's estimate, which as of recent is close to the geometric historical average. We can see again that sharp variations in these assumptions change our implied stock price around \$100.

Sources

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Regeneron Pharmaceuticals Inc

Revenue Decomposition

<i>Fiscal Years Ending Dec. 31</i>	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Product Revenue															
Eylea (Patent Expiration Date: 2027)	24.80	837.90	1,408.70	1,736.40	2,676.00	3,323.10	3,701.90	4,076.70	4,644.20	4,947.20	6,332.42	6,965.66	7,502.01	8,027.15	8,147.56
<i>Growth (YoY)</i>	-	3278.63%	68.12%	23.26%	54.11%	24.18%	11.40%	10.12%	13.92%	6.52%	28.00%	10.00%	7.70%	7.00%	1.50%
Libtayo (Patent Expiration Date: 2035)	-	-	-	-	-	-	-	14.80	175.70	270.70	378.98	454.78	500.25	550.28	605.31
<i>Growth (YoY)</i>	-	-	-	-	-	-	-	-	1087.16%	54.07%	40.00%	20.00%	15.00%	10.00%	10.00%
Arcalyst (Patent Expiration Date: 2027)	19.90	20.20	17.10	14.40	13.50	15.30	16.60	14.70	14.50	13.10	2.20	-	-	-	-
<i>Growth (YoY)</i>	-	1.51%	-15.35%	-15.79%	-6.25%	13.33%	8.50%	-11.45%	-1.36%	-9.66%	-83.21%	-	-	-	-
Evkeeza (Patent Expiration Date: 2035)	-	-	-	-	-	-	-	-	-	-	15.00	15.00	45.00	135.00	405.00
<i>Growth (YoY)</i>	-	-	-	-	-	-	-	-	-	-	-	0.00%	200.00%	200.00%	200.00%
Praluent (Patent Expiration Date: 2032)	-	-	-	-	-	-	-	-	-	150.90	172.03	185.79	198.79	204.76	210.90
<i>Growth (YoY)</i>	-	-	-	-	-	-	-	-	-	-	14.00%	8.00%	7.00%	3.00%	3.00%
REGN-COV2 (Patent Expiration Date: 2040)	-	-	-	-	-	-	-	-	-	185.70	4,271.10	1,281.33	640.67	512.53	410.03
<i>Growth (YoY)</i>	-	-	-	-	-	-	-	-	-	-	2200.00%	-70.00%	-50.00%	-20.00%	-20.00%
Other Revenue															
Other	-	26.50	28.50	31.90	74.80	81.10	116.90	172.20	174.00	557.00	324.45	271.73	299.20	321.13	345.02
<i>Growth (YoY)</i>	-	100.00%	7.55%	11.93%	134.48%	8.42%	44.14%	47.31%	1.05%	220.11%	-41.75%	-16.25%	10.11%	7.33%	7.44%
Collaboration Revenue															
Sanofi collaboration revenue	326.6	423.8	430.1	541.30	758.9	658.7	877.2	1,111.1	403.6	1,186.4	1,779.6	2,046.5	2,353.5	2,588.9	2,847.8
<i>Growth (YoY)</i>	-	29.76%	1.49%	25.85%	40.19%	-13.20%	33.18%	26.67%	-63.68%	193.95%	50.00%	15.00%	15.00%	10.00%	10.00%
Bayer collaboration revenue	43.1	70.1	220.3	495.56	580.5	744.3	938.1	1,076.7	1,145.6	1,186.1	1,328.4	1,408.1	1,450.4	1,493.9	1,538.7
<i>Growth (YoY)</i>	-	62.75%	214.25%	124.96%	17.14%	28.21%	26.04%	14.78%	6.40%	3.54%	12.00%	6.00%	3.00%	3.00%	3.00%
Total Revenues	44.70	884.60	1,454.30	1,782.70	2,764.30	3,419.50	3,835.40	4,278.40	5,008.40	6,124.60	14,604.20	12,628.96	12,989.83	13,833.62	14,510.28
<i>Growth (YoY)</i>	-	1878.97%	64.40%	22.58%	55.06%	23.70%	12.16%	11.55%	17.06%	22.29%	138.45%	-13.53%	2.86%	6.50%	4.89%

Regeneron Pharmaceuticals Inc															
<i>Income Statement</i>															
Fiscal Years Ending Dec. 31	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Revenue:															
Net product sales	44.7	858.1	1,425.8	1,750.76	2,689.5	3,338.4	3,718.5	4,106.2	4,834.4	5,567.6	11,171.7	8,902.6	8,886.7	9,429.7	9,778.8
Sanofi collaboration revenue	326.6	423.8	430.1	541.30	758.9	658.7	877.2	1,111.1	403.6	1,186.4	1,779.6	2,046.5	2,353.5	2,588.9	2,847.8
Bayer collaboration revenue	43.1	70.1	220.3	495.56	580.5	744.3	938.1	1,076.7	1,145.6	1,186.1	1,328.4	1,408.1	1,450.4	1,493.9	1,538.7
Other revenue	31.4	26.5	28.5	31.90	74.8	119.0	338.4	416.8	174.0	557.0	324.4	271.7	299.2	321.1	345.0
Total revenues	445.8	1,378.5	2,104.7	2,819.56	4,103.7	4,860.4	5,872.2	6,710.8	6,557.6	8,497.1	14,604.2	12,629.0	12,989.8	13,833.6	14,510.3
Expenses:															
Research & development expense	529.5	625.6	860.0	1,271.35	1,620.6	2,052.3	2,075.1	2,186.1	3,036.6	2,735.0	2,904.6	2,225.6	2,221.7	2,357.4	2,444.7
Selling, general, & administrative expense	117.3	210.8	329.4	504.76	838.5	1,177.7	1,320.4	1,556.2	1,834.8	1,626.4	1,340.6	2,039.6	2,035.9	2,160.3	2,240.3
Cost of goods sold	4.2	83.9	118.1	129.03	241.7	194.6	202.5	180.0	362.3	491.9	665.4	575.4	591.9	630.3	661.2
Depreciation & Amortization Expense	31.1	36.9	41.2	52.69	74.9	104.7	145.5	148.2	210.3	235.9	215.9	286.4	340.7	393.5	447.7
Cost of collaboration & contract manufacturing	-	0.5	37.3	75.99	151.0	105.1	194.6	254.1	419.9	628.0	589.9	655.7	722.0	774.9	832.6
Total expenses	682.1	957.7	1,385.9	2,033.82	2,926.7	3,634.4	3,938.1	4,324.6	5,863.9	5,717.2	5,716.5	5,782.8	5,912.2	6,316.5	6,626.4
Income (loss) from operations	(205.2)	457.7	760.0	838.43	1,251.9	1,330.7	2,079.6	2,534.4	2,209.8	3,576.6	8,887.7	6,846.2	7,077.6	7,517.1	7,883.9
Other revenues (expense)	3.6	2.0	(0.2)	(25.31)	(12.6)	6.3	24.0	47.3	249.5	290.7	291.0	291.2	291.5	291.7	292.0
Interest expense	(21.3)	(45.3)	(46.4)	(37.37)	(14.2)	(7.2)	(25.1)	(28.2)	(30.2)	(56.9)	(52.7)	(52.8)	(52.9)	(53.0)	(53.1)
Other income (expense), net	(17.7)	(43.3)	(46.7)	(62.68)	(26.8)	(0.9)	(1.1)	19.1	219.3	233.8	238.3	238.4	238.6	238.8	238.9
Income (loss) before income taxes	(222.9)	414.4	713.4	775.75	1,225.1	1,329.8	2,078.5	2,553.5	2,429.1	3,810.4	9,125.9	7,084.6	7,316.2	7,755.9	8,122.8
Income tax expense (benefit)	(1.1)	(335.9)	289.0	427.67	589.0	434.3	880.0	109.1	313.3	297.2	1,921.7	1,491.9	1,540.6	1,633.2	1,710.5
Net income (loss)	(221.8)	750.3	424.4	348.07	636.1	895.5	1,198.5	2,444.4	2,115.8	3,513.2	7,204.2	5,592.7	5,775.5	6,122.6	6,412.3
Basic EPS	(2.45)	6.75	3.83	3.27	5.63	7.76	10.52	21.55	17.74	29.33	65.90	49.70	49.91	51.47	52.48
Total Shares Outstanding	92.80	97.29	99.69	102.43	104.65	106.01	107.62	109.01	110.28	106.95	109.33	112.52	115.73	118.95	122.17

Regeneron Pharmaceuticals Inc
Balance Sheet

Fiscal Years Ending Dec. 31	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Cash & cash equivalents	483.61	230.28	535.61	648.72	809.10	535.20	812.73	1,467.70	1,617.80	2,193.70	6,575.19	13,624.40	19,713.30	25,817.39	32,305.30
Marketable securities	43.33	77.82	158.38	251.76	236.12	503.48	596.85	1,342.20	1,596.50	1,393.30	1,394.55	1,395.81	1,397.07	1,398.32	1,399.58
Accounts receivable - trade, net	28.25	593.21	787.07	739.38	1,152.49	1,343.37	1,538.64	1,723.70	2,100.00	3,111.50	5,536.30	4,411.78	4,403.94	4,673.03	4,846.02
Accounts receivable from Sanofi	74.78	99.91	104.71	121.06	153.15	92.99	193.68	226.40	260.60	404.70	478.03	549.73	632.19	695.41	764.95
Accounts receivable - other	-	-	63.19	156.96	162.15	175.26	242.01	293.10	425.00	598.50	424.24	431.16	449.05	465.85	483.49
Inventories	-	-	70.35	128.86	238.58	399.36	726.14	1,151.20	1,415.50	1,916.60	3,128.08	2,492.71	2,488.28	2,640.32	2,738.06
Prepaid expenses & other current assets	35.80	56.66	32.95	71.49	163.50	130.53	225.10	243.30	273.70	160.80	438.13	378.87	389.69	415.01	435.31
Total current assets	665.78	1,206.01	1,796.93	2,167.46	2,915.10	3,180.19	4,335.03	6,447.60	7,689.10	9,779.10	17,974.52	23,284.47	29,473.53	36,105.34	42,972.71
Marketable securities	283.61	279.42	389.89	460.15	632.16	864.26	1,486.49	1,755.00	3,256.80	3,135.60	3,138.42	3,141.25	3,144.07	3,146.90	3,149.74
Property, plant, & equipment, gross	526.09	560.45	748.60	1,228.29	1,925.22	2,508.93	2,924.90	3,304.50	3,812.80	4,352.70	5,620.92	6,717.61	7,845.63	9,046.93	10,306.99
Less: accumulated depreciation & amortization	158.14	180.51	221.62	253.98	331.10	425.50	566.29	728.70	922.40	1,131.10	1,347.02	1,633.46	1,974.21	2,367.72	2,815.38
Property, plant & equipment, net	367.96	379.94	526.98	974.31	1,594.12	2,083.42	2,358.61	2,575.80	2,890.40	3,221.60	4,273.90	5,084.14	5,871.42	6,679.21	7,491.61
Deferred tax assets	-	340.16	276.56	316.10	461.95	825.30	506.29	828.70	824.20	858.90	1,050.13	1,198.58	1,351.88	1,514.40	1,684.60
Other assets	6.24	23.10	5.33	3.03	5.81	20.29	77.87	127.40	144.70	168.10	166.63	144.10	148.21	157.84	165.56
Total assets	1,323.58	2,080.49	2,951.01	3,871.83	5,609.13	6,973.47	8,764.29	11,734.50	14,805.20	17,163.30	26,603.60	32,852.53	39,989.12	47,603.69	55,464.23
Accounts payable	27.74	38.93	61.94	99.51	140.96	134.98	178.18	218.20	418.10	475.50	666.59	576.44	592.91	631.42	662.31
Accrued expenses & other current liabilities	68.90	73.79	189.90	481.13	516.71	747.57	637.16	772.10	1,211.40	1,521.80	2,473.92	1,971.43	1,967.92	2,088.16	2,165.46
Capital lease obligations	-	-	-	-	-	127.27	-	-	-	-	-	-	-	-	-
Deferred revenue from Sanofi, current portion	20.01	17.02	12.82	15.93	101.57	115.27	177.75	246.70	395.50	464.10	481.35	553.55	636.58	700.24	770.26
Deferred revenue - other, current portion	31.63	33.81	34.19	58.10	51.91	116.40	142.39	205.80	71.60	236.00	372.02	296.45	295.93	314.01	325.63
Total current liabilities	148.27	163.55	298.84	654.66	811.16	1,241.50	1,135.48	1,442.80	2,096.60	2,697.40	3,993.88	3,397.86	3,493.34	3,733.83	3,923.67
Long-term debt	-	-	-	-	-	-	-	-	-	1,978.50	1,978.50	1,978.50	1,978.50	1,978.50	1,978.50
Finance lease liabilities	159.51	159.44	184.26	310.94	362.92	351.57	703.45	708.50	713.90	717.20	721.84	726.51	731.22	735.95	740.71
Deferred revenue from Sanofi	86.02	76.52	76.52	72.37	582.66	503.47	379.94	279.30	509.70	206.00	381.72	438.98	504.83	555.31	610.84
Deferred revenue - other	162.59	131.82	107.68	103.91	82.02	327.30	249.26	184.90	109.30	41.10	126.84	128.91	134.26	139.28	144.55
Convertible senior notes	275.02	296.52	320.32	146.77	-	-	-	-	-	-	-	-	-	-	-
Other long-term liabilities	6.44	7.26	11.33	40.86	115.54	100.39	152.07	361.70	286.00	497.80	523.98	551.55	580.56	611.09	643.24
Total liabilities	837.85	835.11	998.94	1,329.50	1,954.30	2,524.22	2,620.21	2,977.20	3,715.50	6,138.00	7,726.77	7,222.32	7,422.70	7,753.97	8,041.52
Common Equity	1,754.89	1,763.60	2,045.96	2,450.88	3,099.64	3,030.10	3,512.94	4,428.70	4,428.70	6,716.30	7,975.63	9,234.95	10,494.28	11,753.60	13,012.93
Retained earnings (accumulated deficit)	(1,267.32)	(517.05)	(92.69)	255.38	852.70	1,748.22	2,946.73	5,254.30	7,379.80	10,893.00	18,097.20	23,689.93	29,465.48	35,588.11	42,000.45
Accumulated other comprehensive income (loss)	(1.86)	(1.17)	(1.19)	52.25	8.57	(12.84)	0.64	(12.30)	21.10	29.30	29.30	29.30	29.30	29.30	29.30
Treasury stock, at cost	-	-	-	(169.53)	(306.07)	(316.24)	(316.24)	(396.40)	(739.90)	(6,613.30)	(7,225.30)	(7,323.97)	(7,422.63)	(7,521.30)	(7,619.97)
Total stockholders' equity	485.71	1,245.38	1,952.08	2,588.99	3,654.84	4,449.24	6,144.07	9,274.30	11,089.70	11,025.30	18,876.83	25,630.21	32,566.42	39,849.72	47,422.71
Total Liabilities and Stock Holders Equity	1,323.58	2,080.49	2,951.01	3,871.83	5,609.13	6,973.47	8,764.29	11,734.50	14,805.20	17,163.30	26,603.60	32,852.53	39,989.12	47,603.69	55,464.23

Regeneron Pharmaceuticals Inc
Historical Cash Flow Statement

Fiscal Years Ending Dec. 31	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Net income (loss)	(221.76)	750.27	424.36	348.07	636.06	895.52	1,198.51	2,444.40	2,115.80	3,513.20
Depreciation & amortization	31.08	36.94	41.20	52.69	74.91	104.75	145.47	148.20	210.30	235.90
Non-cash compensation expense	56.09	94.16	198.40	307.24	459.05	559.88	507.28	427.40	464.30	432.00
Non-cash interest expense	-	22.93	23.06	18.05	-	-	-	-	-	-
Loss on extinguishment of debt	-	-	-	33.47	18.86	-	-	-	-	-
Other non-cash charges & expenses, net	10.37	34.05	23.69	30.00	33.70	45.14	63.58	12.10	(29.30)	(135.00)
Deferred taxes	-	(340.16)	63.60	(66.60)	(121.62)	(360.08)	318.81	(140.00)	(130.60)	75.60
Trade, Sanofi, & other accounts receivable	(21.12)	(590.09)	(198.66)	(62.43)	(491.42)	(143.83)	(362.72)	(268.90)	(473.10)	(1,356.10)
Inventories	-	-	(47.96)	(60.90)	(111.83)	(149.78)	(314.20)	(387.90)	(335.50)	(529.40)
Prepaid expenses & other assets	(6.03)	(52.62)	(52.77)	(37.77)	(79.48)	23.54	(113.33)	(55.70)	(130.40)	114.90
Deferred revenue	(40.33)	(41.08)	(27.97)	19.10	608.89	244.27	(113.10)	43.40	139.50	148.10
Increase (decrease) in accounts payable, accrued expenses, & other liabilities	50.02	10.98	136.68	162.24	303.66	253.98	(23.19)	58.80	599.00	118.90
Total adjustments	80.08	824.88	159.29	395.08	694.72	577.87	108.60	(249.30)	314.20	(895.10)
Net cash flows from operating activities	(141.68)	(74.62)	583.65	743.16	1,330.78	1,473.40	1,307.11	2,195.10	2,430.00	2,618.10
Purchases of marketable securities	(240.69)	(470.95)	(577.28)	(564.19)	(557.11)	(809.42)	(1,277.14)	(1,845.50)	(3,202.40)	(3,241.00)
Sales or maturities of marketable securities	426.36	439.21	378.15	476.42	327.44	274.46	544.58	775.60	1,604.20	3,785.00
Capital expenditures	(57.22)	(49.34)	(156.32)	(333.01)	(677.93)	(511.94)	(272.63)	(383.10)	(429.60)	(614.60)
Other investing activities	-	-	-	-	-	-	-	(10.00)	-	-
Net cash flows from investing activities	128.47	(81.07)	(355.46)	(420.78)	(907.60)	(1,046.90)	(1,005.18)	(1,463.00)	(2,027.80)	(70.60)
Proceeds from issuance of long-term debt, net of issuance costs	-	-	-	-	-	-	-	-	-	1,981.90
Proceeds from bridge loan facility	-	-	-	-	-	-	-	-	-	1,500.00
Repayment of bridge loan facility	-	-	-	-	-	-	-	-	-	(1,500.00)
Proceeds in connection with finance lease liabilities	-	-	-	-	-	-	57.00	-	-	-
Payments in connection with finance lease liabilities	(1.67)	(2.20)	(2.02)	(1.10)	26.02	(27.69)	(19.93)	-	-	-
Repayments of convertible senior notes	-	-	-	(220.64)	(166.47)	(12.89)	-	-	-	-
Payments in connection with reduction of outstanding warrants	-	-	-	(294.55)	(573.49)	(643.37)	-	-	-	-
Proceeds from issuance of common stock	18.51	63.55	57.39	126.05	206.36	126.74	240.21	114.50	211.80	2,575.20
Payments in connection with common stock tendered for employee tax obligations	-	(163.30)	(195.09)	(267.58)	(160.54)	(143.18)	(301.69)	(187.20)	(188.00)	(680.80)
Repurchases of common stock	-	-	-	-	-	-	-	(4.40)	(275.90)	(5,846.80)
Excess tax benefit from stock-based compensation	-	4.31	216.86	448.56	405.32	-	-	-	-	-
Proceeds in connection with issuance of convertible notes, net of debt issuance costs	391.11	-	-	-	-	-	-	-	-	-
Proceeds in connection with issuance of warrants	93.80	-	-	-	-	-	-	-	-	-
Payment in connection with purchase of convertible note hedges	(117.50)	-	-	-	-	-	-	-	-	-
Net cash flows from financing activities	384.25	(97.65)	77.14	(209.27)	(262.80)	(700.39)	(24.40)	(77.10)	(252.10)	(1,970.50)
Net increase (decrease) in cash & cash equivalents	371.04	(253.33)	305.33	113.11	160.38	(273.90)	277.53	655.00	150.10	577.00
Cash & cash equivalents at beginning of period	112.57	483.61	230.28	535.61	648.72	809.10	535.20	825.20	1,480.20	1,630.30
Cash & cash equivalents at end of period	483.61	230.28	535.61	648.72	809.10	535.20	812.73	1,480.20	1,630.30	2,207.30
Cash paid for interest (net of amounts capitalized)	14.73	21.95	23.84	20.61	10.58	5.45	18.68	22.30	25.00	23.20
Cash paid for income taxes	-	-	-	59.85	276.09	481.36	754.84	205.60	342.30	188.10

Regeneron Pharmaceuticals Inc
Forecasted Cash Flow Statement

Fiscal Years Ending Dec. 31	2021E	2022E	2023E	2024E	2025E
Cash From Operating Activities:					
Net Income	7,204.20	5,592.73	5,775.55	6,122.64	6,412.34
Adjustments to reconcile net income					
Depreciation & Amortization Expense	215.92	286.44	340.75	393.51	447.65
Deferred tax assets	(191.23)	(148.45)	(153.30)	(162.52)	(170.21)
Accounts receivable - trade, net	(2,424.80)	1,124.52	7.84	(269.09)	(172.99)
Accounts receivable from Sanofi	(73.33)	(71.70)	(82.46)	(63.22)	(69.54)
Accounts receivable - other	174.26	(6.93)	(17.89)	(16.80)	(17.63)
Inventories	(1,211.48)	635.37	4.43	(152.04)	(97.74)
Prepaid expenses & other current assets	(277.33)	59.26	(10.83)	(25.31)	(20.30)
Accounts payable	191.09	(90.16)	16.47	38.51	30.89
Accrued expenses & other current liabilities	952.12	(502.50)	(3.50)	120.24	77.30
Capital lease obligations	-	-	-	-	-
Deferred revenue from Sanofi	192.97	129.46	148.88	114.14	125.56
Deferred revenue - other	221.75	(73.49)	4.82	23.10	16.90
Net Cash Provided by Operating Activities	4,974.17	6,934.55	6,030.76	6,123.18	6,562.22
Cash From Investing Activities:					
Marketable securities	(4.08)	(4.08)	(4.08)	(4.09)	(4.09)
Capital Expenditures	(1,268.22)	(1,096.69)	(1,128.03)	(1,201.30)	(1,260.06)
Other assets	1.47	22.54	(4.12)	(9.63)	(7.72)
Net Cash Provided by (used in) Investing Activities	(1,270.83)	(1,078.23)	(1,136.23)	(1,215.01)	(1,271.87)
Cash From Financing Activities:					
Finance lease liabilities	4.64	4.67	4.70	4.73	4.76
Other long-term liabilities	26.18	27.56	29.01	30.54	32.14
Share Repurchases	(612.00)	(98.67)	(98.67)	(98.67)	(98.67)
Proceeds From Issuance of Common Stock	1,259.33	1,259.33	1,259.33	1,259.33	1,259.33
Net Cash Provided by Financing Activities	678.15	1,192.89	1,194.37	1,195.93	1,197.57
Net Change in Cash	4,381.49	7,049.21	6,088.90	6,104.09	6,487.91
Beginning of Year Cash	2,193.70	6,575.19	13,624.40	19,713.30	25,817.39
Ending Cash Balance	6,575.19	13,624.40	19,713.30	25,817.39	32,305.30

Regeneron Pharmaceuticals Inc
Common Size Income Statement

Fiscal Years Ending Dec. 31	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Revenue:															
Net product sales	10.02%	62.25%	67.74%	62.09%	65.54%	68.69%	63.32%	61.19%	73.72%	65.52%	76.50%	70.49%	68.41%	68.17%	67.39%
Sanofi collaboration revenue	73.26%	30.75%	20.44%	19.20%	18.49%	13.55%	14.94%	16.56%	6.15%	13.96%	12.19%	16.21%	18.12%	18.71%	19.63%
Bayer collaboration revenue	9.66%	5.09%	10.47%	17.58%	14.15%	15.31%	15.97%	16.04%	17.47%	13.96%	9.10%	11.15%	11.17%	10.80%	10.60%
Other revenue	7.04%	1.92%	1.35%	1.13%	1.82%	2.45%	5.76%	6.21%	2.65%	6.56%	2.22%	2.15%	2.30%	2.32%	2.38%
Total revenues	99.99%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Expenses:															
Research & development expense	118.77%	45.38%	40.86%	45.09%	39.49%	42.22%	35.34%	32.58%	46.31%	32.19%	19.89%	17.62%	17.10%	17.04%	16.85%
Selling, general, & administrative expense	26.30%	15.29%	15.65%	17.90%	20.43%	24.23%	22.49%	23.19%	27.98%	19.14%	9.18%	16.15%	15.67%	15.62%	15.44%
Cost of goods sold	0.95%	6.09%	5.61%	4.58%	5.89%	4.00%	3.45%	2.68%	5.52%	5.79%	4.56%	4.56%	4.56%	4.56%	4.56%
Depreciation & Amortization Expense	6.97%	2.68%	1.96%	1.87%	1.83%	2.16%	2.48%	2.21%	3.21%	2.78%	1.48%	2.27%	2.62%	2.84%	3.09%
Cost of collaboration & contract manufacturing	-	0.04%	1.77%	2.70%	3.68%	2.16%	3.31%	3.79%	6.40%	7.39%	4.04%	5.19%	5.56%	5.60%	5.74%
Total expenses	152.99%	69.48%	65.85%	72.13%	71.32%	74.78%	67.06%	64.44%	89.42%	67.28%	39.14%	45.79%	45.51%	45.66%	45.67%
Income (loss) from operations	-53.00%	30.53%	34.15%	27.87%	28.68%	25.22%	32.93%	35.56%	10.58%	32.72%	60.86%	54.21%	54.49%	54.34%	54.33%
Other revenues (expenses), net	0.80%	0.15%	-0.01%	-0.90%	-0.31%	0.13%	0.41%	0.70%	3.80%	3.42%	1.99%	2.31%	2.24%	2.11%	2.01%
Interest expense	-4.77%	-3.29%	-2.21%	-1.33%	-0.35%	-0.15%	-0.43%	-0.42%	-0.46%	-0.67%	-0.36%	-0.42%	-0.41%	-0.38%	-0.37%
Other income (expense)	-3.98%	-3.14%	-2.22%	-2.22%	-0.65%	-0.02%	-0.02%	0.28%	3.34%	2.75%	1.63%	1.89%	1.84%	1.73%	1.65%
Income (loss) before income taxes	-60.96%	24.25%	29.72%	23.42%	27.37%	25.18%	32.90%	36.13%	17.27%	38.22%	64.12%	57.99%	58.16%	57.79%	57.63%
Income tax expense (benefit)	-0.25%	-24.36%	13.73%	15.17%	14.35%	8.94%	14.99%	1.63%	4.78%	3.50%	13.16%	11.81%	11.86%	11.81%	11.79%
Net income (loss)	-61.21%	-0.12%	43.45%	38.59%	41.73%	34.12%	47.88%	37.75%	22.04%	41.72%	77.28%	69.80%	70.02%	69.60%	69.41%

Regeneron Pharmaceuticals Inc

Common Size Balance Sheet

Fiscal Years Ending Dec. 31	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Cash & cash equivalents	1082.24%	26.84%	37.56%	37.05%	30.08%	16.03%	21.86%	35.74%	33.46%	39.40%	58.86%	153.04%	221.83%	273.79%	330.36%
Marketable securities	96.97%	9.07%	11.11%	14.38%	8.78%	15.08%	16.05%	32.69%	33.02%	25.03%	12.48%	15.68%	15.72%	14.83%	14.31%
Accounts receivable - trade, net	63.23%	69.13%	55.20%	42.23%	42.85%	40.24%	41.38%	41.98%	43.44%	55.89%	49.56%	49.56%	49.56%	49.56%	49.56%
Accounts receivable from Sanofi	167.35%	11.64%	7.34%	6.91%	5.69%	2.79%	5.21%	5.51%	5.39%	7.27%	4.28%	6.17%	7.11%	7.37%	7.82%
Accounts receivable - other	-	-	4.43%	8.97%	6.03%	5.25%	6.51%	7.14%	8.79%	10.75%	3.80%	4.84%	5.05%	4.94%	4.94%
Inventories	-	-	4.93%	7.36%	8.87%	11.96%	19.53%	28.04%	29.28%	34.42%	28.00%	28.00%	28.00%	28.00%	28.00%
Prepaid expenses & other current assets	80.11%	6.60%	2.31%	4.08%	6.08%	3.91%	6.05%	5.93%	5.66%	2.89%	3.92%	4.26%	4.39%	4.40%	4.45%
Total current assets	1489.90%	140.55%	126.03%	123.80%	108.39%	95.26%	116.58%	157.02%	159.05%	175.64%	160.89%	261.55%	331.66%	382.89%	439.45%
Marketable securities	634.67%	32.56%	27.34%	26.28%	23.51%	25.89%	39.98%	42.74%	67.37%	56.32%	28.09%	35.28%	35.38%	33.37%	32.21%
Property, plant, & equipment, gross	1177.31%	65.31%	52.50%	70.16%	71.58%	75.15%	78.66%	80.48%	78.87%	78.18%	50.31%	75.46%	88.28%	95.94%	105.40%
Less: accumulated depreciation & amortization	353.89%	21.04%	15.54%	14.51%	12.31%	12.75%	15.23%	17.75%	19.08%	20.32%	12.06%	18.35%	22.22%	25.11%	28.79%
Property, plant & equipment, net	823.42%	44.28%	36.96%	55.65%	59.27%	62.41%	63.43%	62.73%	59.79%	57.86%	38.26%	57.11%	66.07%	70.83%	76.61%
Deferred tax assets	-	39.64%	19.40%	18.06%	17.18%	24.72%	13.62%	20.18%	17.05%	15.43%	9.40%	13.46%	15.21%	16.06%	17.23%
Other assets	13.97%	2.69%	0.37%	0.17%	0.22%	0.61%	2.09%	3.10%	2.99%	3.02%	1.49%	1.62%	1.67%	1.67%	1.69%
Total assets	2961.96%	242.46%	206.97%	221.15%	208.56%	208.89%	235.70%	285.78%	306.25%	308.27%	238.13%	369.02%	449.99%	504.83%	567.19%
Accounts payable	62.07%	4.54%	4.34%	5.68%	5.24%	4.04%	4.79%	5.31%	8.65%	8.54%	5.97%	6.47%	6.67%	6.70%	6.77%
Accrued expenses & other current liabilities	154.18%	8.60%	13.32%	27.48%	19.21%	22.39%	17.14%	18.80%	25.06%	27.33%	22.14%	22.14%	22.14%	22.14%	22.14%
Capital lease obligations	-	-	-	-	-	3.81%	-	-	-	-	-	-	-	-	-
Deferred revenue from Sanofi, current portion	44.78%	1.98%	0.90%	0.91%	3.78%	3.45%	4.78%	6.01%	8.18%	8.34%	4.31%	6.22%	7.16%	7.43%	7.88%
Deferred revenue - other, current portion	70.78%	3.94%	2.40%	3.32%	1.93%	3.49%	3.83%	5.01%	1.48%	4.24%	3.33%	3.33%	3.33%	3.33%	3.33%
Total current liabilities	331.81%	19.06%	20.96%	37.39%	30.16%	37.19%	30.54%	35.14%	43.37%	48.45%	35.75%	38.17%	39.31%	39.60%	40.12%
Long-term debt	-	-	-	-	-	-	-	-	-	35.54%	17.71%	22.22%	22.26%	20.98%	20.23%
Finance lease liabilities	356.95%	18.58%	12.92%	17.76%	13.49%	10.53%	18.92%	17.25%	14.77%	12.88%	6.46%	8.16%	8.23%	7.80%	7.57%
Deferred revenue from Sanofi	192.49%	8.92%	5.37%	4.13%	21.66%	15.08%	10.22%	6.80%	10.54%	3.70%	3.42%	4.93%	5.68%	5.89%	6.25%
Deferred revenue - other	363.86%	15.36%	7.55%	5.94%	3.05%	9.80%	6.70%	4.50%	2.26%	0.74%	1.14%	1.45%	1.51%	1.48%	1.48%
Convertible senior notes	615.45%	34.56%	22.47%	8.38%	-	-	-	-	-	-	-	-	-	-	-
Other long-term liabilities	14.42%	0.85%	0.79%	2.33%	4.30%	3.01%	4.09%	8.81%	5.92%	8.94%	4.69%	6.20%	6.53%	6.48%	6.58%
Total liabilities	1874.97%	97.32%	70.06%	75.94%	72.66%	75.61%	70.46%	72.50%	76.86%	110.24%	69.16%	81.13%	83.53%	82.23%	82.23%
Common Equity	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Retained earnings (accumulated deficit)	-2836.06%	-60.26%	-6.50%	14.59%	31.71%	52.37%	79.25%	127.96%	152.65%	195.65%	161.99%	266.10%	331.57%	377.40%	429.51%
Accumulated other comprehensive income (loss)	-4.17%	-0.14%	-0.08%	2.98%	0.32%	-0.38%	0.02%	-0.30%	0.44%	0.53%	0.26%	0.33%	0.33%	0.31%	0.30%
Treasury stock, at cost	-	-	-	-9.68%	-11.38%	-9.47%	-8.50%	-9.65%	-15.30%	-118.78%	-64.67%	-82.27%	-83.52%	-79.76%	-77.92%
Total stockholders' equity	1086.93%	145.13%	136.91%	147.88%	135.89%	133.28%	165.23%	225.86%	229.39%	198.03%	168.97%	287.90%	366.46%	422.60%	484.95%
Total Liabilities and Stock Holders Equity	2961.96%	242.46%	206.97%	221.15%	208.56%	208.89%	235.70%	285.78%	306.25%	308.27%	238.13%	369.02%	449.99%	504.83%	567.19%

Regeneron Pharmaceuticals Inc															
Value Driver Estimation															
Fiscal Years Ending Dec. 31	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Revenue	445.82	1,378.48	2,104.75	2,819.56	4,103.73	4,860.43	5,872.23	6,710.80	6,557.60	8,497.10	14,604.20	12,628.96	12,989.83	13,833.62	14,510.28
Research & development expense	529.51	625.55	859.95	1,271.35	1,620.58	2,052.30	2,075.14	2,186.10	3,036.60	2,735.00	2,904.65	2,225.64	2,221.68	2,357.43	2,444.70
Selling, general, & administrative expense	117.26	210.76	329.42	504.76	838.53	1,177.70	1,320.43	1,556.20	1,834.80	1,626.40	1,340.61	2,039.57	2,035.94	2,160.34	2,240.32
Cost of goods sold	4.22	83.93	118.05	129.03	241.70	194.62	202.51	180.00	362.30	491.90	665.43	575.43	591.88	630.32	661.15
Depreciation & Amortization Expense	31.08	36.94	41.20	52.69	74.91	104.75	145.47	148.20	210.30	235.90	215.92	286.44	340.75	393.51	447.65
Cost of collaboration & contract manufacturing	-	0.53	37.31	75.99	151.01	105.07	194.55	254.10	419.90	628.00	589.90	655.70	721.98	774.91	832.55
Implied Interests on Operating Leases	2.30	2.02	1.94	2.47	2.31	2.45	1.11	0.50	0.58	0.59	-	-	-	-	-
EBIT	(233.95)	422.79	720.75	788.21	1,179.31	1,228.44	1,935.24	2,386.70	694.28	2,780.49	8,887.69	6,846.18	7,077.60	7,517.10	7,883.91
Income tax expense	(1.13)	(335.85)	289.00	427.67	589.04	434.29	880.00	109.10	313.30	297.20	1,921.74	1,491.88	1,540.64	1,633.23	1,710.51
Interest expense	-	(18.30)	(17.86)	(13.95)	(5.29)	(2.68)	(8.99)	(5.92)	(6.07)	(10.94)	(10.14)	(10.16)	(10.17)	(10.19)	(10.21)
Less Other revenues (expense), net	-	0.81	(0.09)	(9.45)	(4.67)	2.33	8.61	9.93	50.11	55.91	55.96	56.01	56.06	56.11	56.17
PV of Operating Leases	-	0.82	0.75	0.92	0.86	0.91	0.40	0.11	0.12	0.13	0.13	0.18	0.21	0.24	0.28
Less Other income (expense)	-	(17.49)	(17.95)	(23.40)	(9.96)	(0.35)	(0.39)	4.01	44.05	44.97	45.83	45.86	45.89	45.92	45.96
Total adjusted taxes	(1.13)	(336.66)	289.92	447.49	599.24	430.54	863.19	89.35	213.19	185.50	1,809.95	1,380.02	1,428.72	1,521.24	1,598.45
Deferred Tax assets	-	340.16	276.56	316.10	461.95	825.30	506.29	828.70	824.20	858.90	1,050.13	1,198.58	1,351.88	1,514.40	1,684.60
Deferred Tax Liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in Deferred Taxes	-	(340.16)	63.60	(39.55)	(145.84)	(363.36)	319.01	(322.41)	4.50	(34.70)	(191.23)	(148.45)	(153.30)	(162.52)	(170.21)
NOPLAT	(232.82)	419.29	494.43	301.17	434.23	434.54	1,391.07	1,974.95	485.59	2,560.29	6,886.52	5,317.70	5,495.57	5,833.34	6,115.25
Operating Current Assets															
Normal Cash	49.09	151.79	231.76	310.47	451.88	535.20	646.62	738.96	722.09	935.65	1,608.13	1,390.63	1,430.37	1,523.28	1,597.79
Accounts receivable - trade, net	28.25	593.21	787.07	739.38	1,152.49	1,343.37	1,538.64	1,723.70	2,100.00	3,111.50	5,536.30	4,411.78	4,403.94	4,673.03	4,846.02
Accounts receivable from Sanofi	74.78	99.91	104.71	121.06	153.15	92.99	193.68	226.40	260.60	404.70	478.03	549.73	632.19	695.41	764.95
Accounts receivable - other	-	-	63.19	156.96	162.15	175.26	242.01	293.10	425.00	598.50	424.24	431.16	449.05	465.85	483.49
Inventories	-	-	70.35	128.86	238.58	399.36	726.14	1,151.20	1,415.50	1,916.60	3,128.08	2,492.71	2,488.28	2,640.32	2,738.06
Prepaid expenses	35.80	56.66	32.95	71.49	163.50	130.53	225.10	243.30	273.70	160.80	438.13	378.87	389.69	415.01	435.31
Operating Current Liabilities															
Accounts payable	27.74	38.93	61.94	99.51	140.96	134.98	178.18	218.20	418.10	475.50	666.59	576.44	592.91	631.42	662.31
Accrued expenses & other current liabilities	68.90	73.79	189.90	481.13	516.71	747.57	637.16	772.10	1,211.40	1,521.80	2,473.92	1,971.43	1,967.92	2,088.16	2,165.46
Deferred revenue from Sanofi (current portion)	20.01	17.02	12.82	15.93	101.57	115.27	177.75	246.70	395.50	464.10	-	-	-	-	-
Deferred revenue - other (current portion)	31.63	33.81	34.19	58.10	51.91	116.40	142.39	205.80	71.60	236.00	481.35	553.55	636.58	700.24	770.26
Operating Working Capital	39.66	738.02	991.20	873.56	1,510.59	1,562.49	2,436.71	2,933.86	3,100.29	4,430.35	7,991.04	6,553.48	6,596.12	6,993.08	7,267.58
Net PPE	367.96	379.94	526.98	974.31	1,594.12	2,083.42	2,358.61	2,575.80	2,890.40	3,221.60	4,273.90	5,084.14	5,871.42	6,679.21	7,491.61
PV of operating leases	82.63	79.35	100.99	94.50	100.12	45.52	20.61	23.74	24.31	27.10	35.95	42.77	49.39	56.18	63.02
Deferred revenue from Sanofi	86.02	76.52	76.52	72.37	582.66	503.47	379.94	279.30	509.70	206.00	381.72	438.98	504.83	555.31	610.84
Deferred revenue - other	162.59	131.82	107.68	103.91	82.02	327.30	249.26	184.90	109.30	41.10	126.84	128.91	134.26	139.28	144.55
Invested Capital	241.63	988.97	1,434.97	1,766.09	2,540.15	2,860.66	4,186.73	5,069.19	5,396.00	7,431.95	11,792.33	11,112.50	11,877.84	13,033.88	14,066.82
Free Cash Flow (FCF):															
NOPLAT	-	419	494	301	434	435	1391	1975	486	2560	6887	5318	5496	5833	6115
Change in IC	-	747	446	331	774	321	1326	882	327	2036	4360	-680	765	1156	1033
FCF	-	-328.1	48.4	-29.9	-339.8	114.0	65.0	1092.5	158.8	524.3	2526.1	5997.5	4730.2	4677.3	5082.3
Return on Invested Capital (ROIC):															
NOPLAT	-	419	494	301	434	435	1391	1975	486	2560	6887	5318	5496	5833	6115
Beginning IC	-	\$ 241.6	\$ 989.0	\$ 1,435.0	\$ 1,766.1	\$ 2,540.1	\$ 2,860.7	\$ 4,186.7	\$ 5,069.2	\$ 5,396.0	\$ 7,432.0	\$ 11,792.3	\$ 11,112.5	\$ 11,877.8	\$ 13,033.9
ROIC		173.53%	49.99%	20.99%	24.59%	17.11%	48.63%	47.17%	9.58%	47.45%	92.66%	45.09%	49.45%	49.11%	46.92%
Economic Profit (EP):															
Beginning IC	-	241.63	988.97	1,434.97	1,766.09	2,540.15	2,860.66	4,186.73	5,069.19	5,396.00	7,431.95	11,792.33	11,112.50	11,877.84	13,033.88
x (ROIC - WACC)	-	1.65	0.41	0.12	0.16	0.08	0.40	0.39	1%	39%	84%	36%	41%	41%	38%
EP	-	398.5	409.3	177.6	282.2	215.9	1144.8	1614.5	49.2	2095.8	6246.7	4302.6	4539.0	4810.9	4993.2

Regeneron Pharmaceuticals Inc		
Weighted Average Cost of Capital (WACC) Estimation		
Cost of Equity:		
Risk-Free Rate	1.65%	ASSUMPTIONS: current YTM on 10-year treasury
Beta	1.47	2-year weekly raw beta
Equity Risk Premium	4.93%	Damodaran forward ERP
Cost of Equity	8.88%	
Cost of Debt:		
Risk-Free Rate	1.65%	current YTM on 10-year treasury
Implied Default Premium	0.79%	
Pre-Tax Cost of Debt	2.44%	YTM on 10-yr bond
Marginal Tax Rate	20.10%	
After-Tax Cost of Debt	1.95%	
Market Value of Common Equity:		
		MV Weights
Total Shares Outstanding	105.10	
Current Stock Price	\$635.34	
MV of Equity	66,774.23	96.12%
Market Value of Debt:		
Short-Term Debt	720.00	
Current Portion of LTD		
Long-Term Debt	1978.5	
PV of Operating Leases		
MV of Total Debt	2,698.50	3.88%
Market Value of the Firm	69,472.73	100.00%
Estimated WACC	8.6084%	

Regeneron Pharmaceuticals Inc

Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models

Key Inputs:

CV Growth of NOPLAT	2.00%
CV Year ROIC	46.92%
WACC	8.61%
Cost of Equity	8.88%

Fiscal Years Ending Dec. 31	2021E	2022E	2023E	2024E	2025E
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DCF Model:

Free Cash Flow (FCF)	2526.1	5997.5	4730.2	4677.3	5082.3
Continuing Value (CV)					88593.2
PV of FCF	2325.9	5084.5	3692.3	3361.6	63671.8

Value of Operating Assets:	78136.0
Non-Operating Adjustments	
Marketable Securities	4528.9
Debt	-2698.5
ESOP	-7203.7
Value of Equity	72762.7
Shares Outstanding	122.2
Intrinsic Value of Last FYE	\$ 595.56
Implied Price as of Today	\$ 641.67

EP Model:

Economic Profit (EP)	6246.7	4302.6	4539.0	4810.9	4993.2
Continuing Value (CV)					75559.33
PV of EP	5751.6	3647.6	3543.0	3457.6	54304.4

Total PV of EP	70704.1
Invested Capital (last FYE)	7432.0
Value of Operating Assets:	78136.0
Non-Operating Adjustments	
Marketable Securities	4528.9
Debt	-2698.5
ESOP	-7203.7
Value of Equity	72762.7
Shares Outstanding	122.2
Intrinsic Value of Last FYE	\$ 595.56
Implied Price as of Today	\$ 641.67

Regeneron Pharmaceuticals Inc					
<i>Dividend Discount Model (DDM) or Fundamental P/E Valuation Model</i>					
Fiscal Years Ending Dec. 31	2021E	2022E	2023E	2024E	2025E
EPS	\$ 65.90	\$ 49.70	\$ 49.91	\$ 51.47	\$ 52.48
Key Assumptions					
CV growth of EPS	2.50%				
CV Year ROE	13.52%				
Cost of Equity	8.88%				
Future Cash Flows					
P/E Multiple (CV Year)					12.78
EPS (CV Year)					\$ 52.48
Future Stock Price					\$ 670.82
Dividends Per Share	0	\$ -	\$ -	\$ -	
Discounted Cash Flows	0	0	0	0	\$ 477.37
Intrinsic Value as of Last FYE	\$ 477.37				
Implied Price as of Today	\$ 514.33				

Regeneron Pharmaceuticals Inc						
<i>Relative Valuation Models</i>						
Ticker	Company	Price	EPS 2021E	EPS 2022E	P/E 21	P/E 22
VRTX	Vertex Pharmaceutical	\$187.29	\$8.46	\$11.52	22.14	16.26
GILD	Gilead Sciences	\$67.48	\$5.28	\$5.32	12.78	12.68
ABBV	Abbvie, Inc.	\$116.97	\$6.69	\$9.73	17.48	12.02
MRNA	Moderna, Inc.	\$231.19	\$31.08	\$26.33	7.44	8.78
BMY	Bristol-Myers Squibb	\$59.43	\$3.03	\$5.39	19.61	11.03
PFE	Pfizer, Inc.	\$49.73	\$3.52	\$3.29	14.13	15.12
Average					16.32	12.93
REGN	Regeneron Pharmaceuticals Inc	\$635.34	65.90	49.70	9.6	12.8
Implied Relative Value:						
P/E (EPS21)			\$ 1,075.50			
P/E (EPS22)			\$ 642.84			

Regeneron Pharmaceuticals Inc											
<i>Present Value of Operating Lease Obligations</i>											
Fiscal Years Ending Dec. 31	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Year 1	6.323	7.3	8.8	10.9	10.8	15.5	9.9	9.0	10.4	7.6	0.0
Year 2	5.586	7.6	7.8	9.9	10.2	11.8	5.7	3.9	3.8	6.6	0.0
Year 3	6.641	7.5	7.8	9.9	9.6	11.7	5.1	3.1	3.4	3.3	0.0
Year 4	6.733	7.6	7.9	9.4	9.8	11.7	4.3	2.4	2.2	2.0	0.0
Year 5	6.866	7.7	7.5	9.6	10.0	11.4	4.0	1.9	1.5	2.3	0.0
Thereafter	64.196	59.6	52.5	67.8	58.3	50.7	22.3	1.5	4.1	4.3	0.0
Total Minimum Payments	96.345	97.2	92.2	117.6	108.6	112.9	51.3	21.9	25.4	26.1	0.0
Less: Cumulative Interest	2.3	14.6	12.9	16.6	14.1	12.7	5.7	1.3	1.7	1.8	0.0
PV of Minimum Payments	94.1	82.6	79.3	101.0	94.5	100.1	45.5	20.6	23.7	24.3	27.1
Implied Interest in Year 1 Payment		2.3	2.0	1.9	2.5	2.3	2.4	1.1	0.5	0.6	0.6
Pre-Tax Cost of Debt	2.44%	2.44%	2.44%	2.44%	2.44%	2.44%	2.44%	2.44%	2.44%	2.44%	2.44%
Years Implied by Year 6 Payment	9.3	7.7	7.0	7.1	5.9	4.5	5.6	1.0	2.7	1.9	0.0
Expected Obligation in Year 6 & Beyond	6.866	7.738	7.517	9.606	9.957	11.375	3.993	1.506	1.5	2.3	0
Present Value of Lease Payments											
PV of Year 1	6.2	7.1	8.5	10.7	10.6	15.1	9.6	8.7	10.2	7.4	0.0
PV of Year 2	5.3	7.2	7.5	9.4	9.7	11.2	5.4	3.7	3.6	6.3	0.0
PV of Year 3	6.2	6.9	7.2	9.2	8.9	10.9	4.7	2.9	3.2	3.1	0.0
PV of Year 4	6.1	6.9	7.1	8.6	8.9	10.7	3.9	2.2	2.0	1.8	0.0
PV of Year 5	6.1	6.9	6.7	8.5	8.8	10.1	3.5	1.7	1.3	2.0	0.0
PV of 6 & beyond	64.2	47.6	42.3	54.6	47.6	42.1	18.3	1.3	3.5	3.7	0.0
Capitalized PV of Payments	94.1	82.6	79.3	101.0	94.5	100.1	45.5	20.6	23.7	24.3	0.0

Regeneron Pharmaceuticals Inc					
<i>Effects of ESOP Exercise and Share Repurchases on Common Stock Account and Number of Shares Outstanding</i>					
Number of Options Outstanding (shares):	20,764,534				
Average Time to Maturity (years):	6.22				
Expected Annual Number of Options Exercised:	3,338,350				
Current Average Strike Price:	\$ 377.23				
Cost of Equity:	8.88%				
Current Stock Price:	\$635.34				
Fiscal Years Ending Dec. 31	2021E	2022E	2023E	2024E	2025E
Increase in Shares Outstanding:	3,338,350	3,338,350	3,338,350	3,338,350	3,338,350
Average Strike Price:	377	377	377	377	377
Increase in Common Stock Account:	1,259	1,259	1,259	1,259	1,259
Share Repurchases (\$)	612	99	99	99	99
Expected Price of Repurchased Shares:	635	692	753	820	893
Number of Shares Repurchased:	0.96	0.14	0.13	0.12	0.11
Shares Outstanding (beginning of the year)	107	109	113	116	119
Plus: Shares Issued Through ESOP	3	3	3	3	3
Less: Shares Repurchased in Treasury	0.96	0.14	0.13	0.12	0.11
Shares Outstanding (end of the year)	109.33	112.52	115.73	118.95	122.17

Regeneron Pharmaceuticals Inc					
<i>Valuation of Options Granted under ESOP</i>					
Current Stock Price					\$635.34
Risk Free Rate					1.65%
Current Dividend Yield					0.00%
Annualized St. Dev. of Stock Returns					34.51%
Range of Outstanding	Number of Shares	Average Exercise Price	Average Remaining Life (yrs)	B-S Option Price	Value of Options Granted
Range 1	20,764,534	377.23	6.22	\$ 346.92	\$ 7,203,677,165
Range 2					
Range 3					
Range 4					
Range 5					
Range 6				\$	-
Range 7				\$	-
Range 8				\$	-
Range 9				\$	-
Total	20,764,534	\$ 377.23	6.22	\$ 346.92	\$ 7,204

Regeneron Pharmaceuticals Inc
Sensitivity Tables

		Beta							
		\$ 641.52	1.17	1.27	1.37	1.47	1.57	1.67	1.77
Equity Risk premium	5.23%	772.71	705.05	647.76	600.46	556.03	518.74	485.81	
	5.13%	789.56	720.43	661.90	613.59	568.21	530.13	496.51	
	5.03%	807.13	736.45	676.63	627.26	580.90	541.99	507.66	
	4.93%	825.45	753.16	691.99	641.52	594.13	554.36	519.27	
	4.83%	844.58	770.60	708.03	656.40	607.93	567.26	531.38	
	4.73%	864.57	788.83	724.77	671.93	622.34	580.73	544.03	
	4.63%	885.48	807.89	742.29	688.18	637.40	594.81	557.25	

		Implied Depreciation Rate							
		\$641.52	3.70%	4.70%	5.70%	6.70%	7.70%	8.70%	9.70%
WACC	11.61%	424.50	422.11	419.87	417.75	415.77	413.91	412.17	
	10.61%	482.79	479.98	477.35	474.86	472.54	470.35	468.30	
	9.61%	556.53	553.20	550.06	547.10	544.33	541.73	539.29	
	8.61%	652.93	648.90	645.10	641.52	638.16	635.00	632.04	
	7.61%	783.49	778.50	773.80	769.36	765.20	761.29	757.62	
	6.61%	971.21	964.84	958.83	953.15	947.83	942.82	938.11	
	5.61%	1,263.31	1,254.76	1,246.69	1,239.07	1,231.93	1,225.19	1,218.86	

		Normal Cash Estimate							
		\$ 641.52	1.25%	1.50%	1.75%	2.00%	2.25%	2.50%	2.75%
Cost of Equity	11.88%	656.78	656.78	656.78	656.78	656.78	656.78	656.78	656.78
	10.88%	651.71	651.71	651.71	651.71	651.71	651.71	651.71	651.71
	9.88%	646.62	646.62	646.62	646.62	646.62	646.62	646.62	646.62
	8.88%	641.52	641.52	641.52	641.52	641.52	641.52	641.52	641.52
	7.88%	636.44	636.44	636.44	636.44	636.44	636.44	636.44	636.44
	6.88%	631.34	631.34	631.34	631.34	631.34	631.34	631.34	631.34
	5.88%	626.24	626.24	626.24	626.24	626.24	626.24	626.24	626.24

		R&D as % of Sales							
		\$ 641.52	1.00%	6.00%	16.00%	26.00%	31.00%	36.00%	41.00%
Risk Free Rate	1.95%	629.67	626.19	619.22	612.25	608.77	605.28	601.80	
	1.85%	639.16	635.67	628.71	621.74	618.25	614.77	611.29	
	1.75%	648.91	645.43	638.46	631.49	628.01	624.52	621.04	
	1.65%	658.94	655.46	648.49	641.52	638.03	634.55	631.07	
	1.55%	669.26	665.78	658.81	651.84	648.35	644.87	641.38	
	1.45%	679.88	676.40	669.42	662.45	658.97	655.48	652.00	
	1.35%	690.82	687.33	680.36	673.39	669.90	666.42	662.93	

		CapEx as % of total Rev							
		\$ 641.52	5.68%	6.68%	7.68%	8.68%	9.68%	10.68%	11.68%
CV Growth of NOPLAT	3.50%	809.46	800.35	791.25	782.10	773.04	763.93	754.82	
	3.00%	752.00	743.64	735.28	726.89	718.56	710.20	701.84	
	2.50%	703.94	696.21	688.47	680.71	673.01	665.27	657.54	
	2.00%	663.16	655.96	648.75	641.52	634.34	627.14	619.93	
	1.50%	628.11	621.37	614.62	607.84	601.12	594.37	587.62	
	1.00%	597.68	591.32	584.97	578.59	572.26	565.91	559.56	
	0.50%	570.99	564.98	558.98	552.95	546.96	540.96	534.95	

		Pre-Tax Cost of Debt							
		\$ 641.52	1.59%	1.89%	2.19%	2.44%	2.79%	3.09%	3.39%
Cost of Equity	11.88%	659.19	658.34	657.50	656.78	655.81	654.97	654.13	
	10.88%	654.10	653.25	652.41	651.71	650.74	649.90	649.07	
	9.88%	648.99	648.16	647.32	646.62	645.66	644.83	644.01	
	8.88%	643.87	643.04	642.22	641.52	640.57	639.75	638.93	
	7.88%	638.77	637.95	637.13	636.44	635.49	634.68	633.87	
	6.88%	633.66	632.84	632.03	631.34	630.40	629.60	628.79	
	5.88%	628.53	627.72	626.92	626.24	625.31	624.51	623.71	