Sanofi	
Ticker Site BiG	SAN
Ticker BiGlobal Trade	SAN
Ticker BT24	SAN
Ticker BiG Power Trade	SAN
P/E Ratio 2020E	14,65
P/BV Ratio	1,72
EV/EBITDA	7,87

Source: BiG Research

Price and Performance (Values in EUR)	
Price	86,44
52 week high	95,82
52 week low	67,65
YTD	-3,5%
Average daily volume (un)	2.323.866
Market Capitalization (mn)	108.823
Beta	0,68
Dividend	3,15
EPS	2,24

Source: BiG Research

Financial Data	
Sales (EUR mn)	37.631
EBITDA (EUR mn)	6.690
Number of Employees	100.409
ROA	9,8%
ROE	18,4%
D/E	0,44
Dividend Yield	3,64%

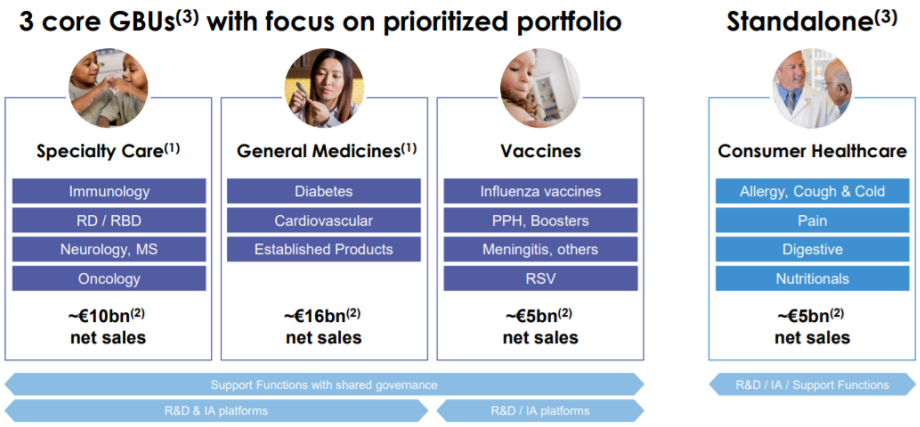
Source: BiG Research

Notes:
All quotes were updated in Bloomberg at 16h05 of October 09th, 2020.

Sanofi (Ticker: SAN FP)

Description

Sanofi is a French healthcare company transitioning from legacy segments such as diabetes and cardiovascular to new growth areas such as immunology, rare diseases, neurology and oncology. It also has a vaccines segment, a stable source of revenues. It is present around the globe. The company has made multiple acquisitions throughout its history including Aventis (2004, EUR 55bn), Genzyme (2011, USD 20bn), Bioverativ (2018, USD 11.6bn), Synthrox (2020, USD 2.5bn) and Principia Bipharma (2020, USD 3.7 bn).



Source: Sanofi

Main investment points

Dupixent growth: Sanofi developed with Regeneron this immunology drug which was first approved for patients with severe atopic dermatitis, but has been extended to treat patients with other conditions such as asthma or chronic rhinusitis. According to Sanofi, Dupixent has potential for EUR 10 bn in annual sales, having achieved in 2019 EUR 2bn vs only EUR 800 mn in 2018.

Dividend yield of 3.6%: with cash flows being enough to sustain capex and the dividend.

Management: Since 2015, Sanofi had already 3 CEOs, due to changes in strategy. The first wanted to restructure and fire thousands of employees in France which was publicly criticized, Olivier Brandicourt joined in 2015 and focused on diabetes and cardiovascular drugs, and now Paul Hudson (nominated in 2019) will shift this focus towards MS, Immunology, oncology and rare diseases.

Legacy products decline: The General Medicines division had a drop of sales of between 6% to 7% in 2019 due to increased competition and decline in prices in these segments. Sanofi is decreasing R&D spending in these areas in order to favor higher growth opportunities. However, this segment still represents around 45% of total sales and if Sanofi is unable to compensate for this decline, company sales may start to decline. Still, for 2020 Sanofi expects an increase of EPS between 6% and 7%.

M&A: At end of June 2020, Sanofi had only EUR 5bn in net debt, being able this way to advance towards further acquisitions. Usually smaller companies with promising drugs are bought in order to take advantage of Sanofi capabilities of regulatory approval, development and marketing. However, in some cases the perspectives are too optimistic and Sanofi has to constitute an impairment on goodwill due to lower sales perspectives, as it happened with Bioverativ.

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Income Statement (EUR mn)	2019	2018	2017
Revenues	**37631**	**35677**	**36204**
Cost of sales	11976	11435	11611
Amortization	2146	2170	1866
Research & Development	6018	5894	5472
Sales & Marketing	9883	9859	10058
Impairment of intangibles	3604	718	293
Restructuring Costs and similar	1062	1480	731
Other	-183	-555	370
Operating Expenses	**34506**	**31001**	**30401**
EBIT	**3125**	**4676**	**5803**
Financial expenses	303	271	273
EBT	**2822**	**4405**	**5530**
Taxes	139	481	1722
Other	255	499	4626
Net Income	**2938**	**4423**	**8434**
Earnings Per Share	**2,33**	**3,46**	**6,71**

Source: Company's data

Free Cash Flow (EUR mn)	2019	2018	2017
Operational Cash Flow	**7744**	**5547**	**7379**
Business Net Income	2806	4306	3773
Depreciation and Amortization	7452	4279	3686
Changes in Working Capital	-419	-1280	147
Others	-2095	-1758	-227
Investment Cash Flow	**-1212**	**-12866**	**-2896**
Capex	-592	186	-1421
M&A	-488	-12857	-1151
Others	-132	-195	-324
Financial Cash Flow	**-4193**	**3934**	**-7902**
Debt change	-224	8722	-2297
Share buyback	153	-924	-1843
Dividends	-3848	-3787	-3725
Others	-274	-77	-37
Change in free cash flow	**2339**	**-3385**	**-3419**
Other and forex	**163**	**-5**	**3461**
Cash end of year	**9427**	**6925**	**10315**

Source: Company's data

Balance Sheet (EUR mn)	2019	2018	2017
Assets	**112736**	**111408**	**99826**
Cash & Equivalents	9427	6925	10315
Receivables and Inventories	15931	17654	16037
Property Plant & Equipment	11017	9651	9579
Intangible Assets & Goodwill	61091	66124	53344
Other Assets	15270	11054	10551
Liabilities	**53628**	**52373**	**41574**
Short term Debt	4554	2633	1275
Long term Debt	20131	22007	14326
Payables & accrued expenses	5313	5041	4633
Provisions	19282	17974	18366
Other liabilities	4348	4718	2974
Total Shareowner's Equity	**59108**	**59035**	**58239**
Total Equity and Liabilities	**112736**	**111408**	**99813**

Source: Company's data

Income Statement

Revenues are divided between the net sales of pharmaceutical and consumer health products and active ingredients in vaccines, directly to customers (wholesalers, distributors, pharmacies, hospitals, clinics and government agencies) and royalties received through licensing agreements (recorded in Other Revenues).

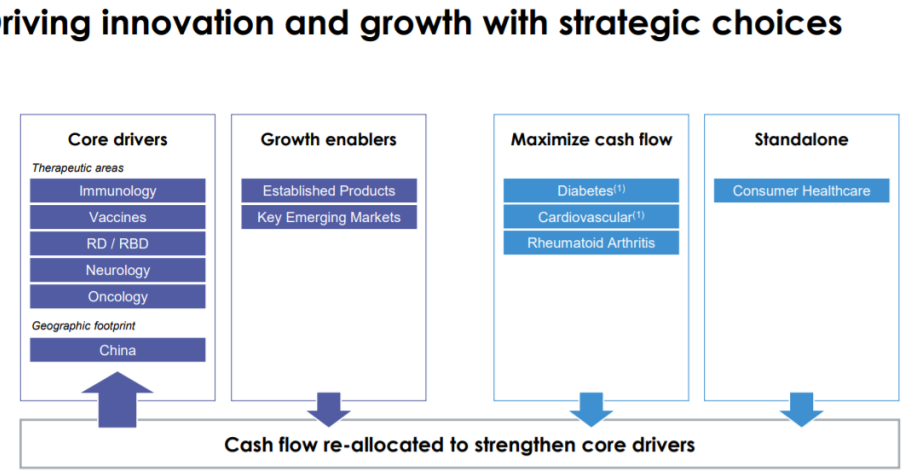
Cost of sales includes salaries, cost of raw materials and ingredients and other costs related to manufacturing process, packaging, distribution and payments.
Research & Development represented around 17% of revenues in 2019.
Sales & General Expenses: includes commission paid to distributors.

Impairments: In 2019 Sanofi recorded impairment losses of EUR 3.6 bn due to ongoing competitive pressure in the market for hemophilia for the Eloctate drug (EUR 2.8bn), recall of the Zantac in US and Canada (EUR 352 mn) and other losses in development projects (EUR 280 mn). In 2018, impairments were only regarding development projects (EUR 454 mn) and rights of Lemtrada (EUR 183 mn).
Restructuring costs: In 2019 these costs were mainly termination benefit payments in Europe, US and Asia of EUR 791 mn.

Other includes litigation costs and gains, among other things.
Tax rate was around 5% at consolidated level due to high restructuring and impairment losses.

Free Cash Flow

In 2019 capex amounted to EUR 1.8 mn mostly in Pharmaceuticals segment in industrial facilities (EUR 851 mn), followed by Vaccines (EUR 462 mn) and intangibles of EUR 493 mn). Acquired EUR 526 mn in equity of other entities and sold the equity stake in Alnylam (EUR 706 mn).
In 2018 Sanofi completed the acquisitions of Bioverativ and Ablynx for EUR 12.7bn and the divestment of European generic business for EUR 1.6bn.



Source: Sanofi

Balance Sheet

In June of 2020, Sanofi had a net debt of EUR 8 bn (vs EUR 15.1bn in 2019), with cash and equivalents of EUR 16 bn and EUR 2 bn in receivables minus payables. The decline in net debt is explained by the sale of Regeneron's stake in May 2020.
As it is common in this industry, intangibles and goodwill (EUR 62 bn) represent more than 50% of the assets, while provisions amount to EUR 20 bn.

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First-half 2020 earnings:

In the first half of 2020 Sanofi achieved a sales growth at constant exchange rate (CER) of +1.6% to EUR 17.18 bn despite a slowdown in sales of vaccines, general medicines and consumer healthcare due to Covid-19 restrictions. EPS achieved a growth of +9.2% driven by transformation strategy.
Dupixent achieved a growth of more than 90% achieving sales of EUR 1.6 bn in 1H20.

Net sales by GBU (€ million)	H1 2020	Change at CER	U.S.	Change at CER	Europe	Change at CER	Rest of the World	Change at CER
Specialty Care	**5,402**	**+23.9%**	**3,348**	**+28.3%**	**1,115**	**+14.9%**	**939**	**+21.0%**
Dupixent	1,634	+93.8%	**1,310**	+91.0%	174	+109.6%	150	+101.4%
Multiple Sclerosis/ Neurology/Other I&I	1,253	+7.3%	874	+10.1%	286	—%	93	+6.8%
Rare Disease	1,532	+5.2%	563	+3.0%	500	+2.9%	469	+10.2%
Oncology	375	+23.2%	173	+19.0%	136	+28.3%	66	+24.1%
Rare Blood Disorder	608	+5.0%	428	-2.3%	19	+111.1%	161	+21.7%
General Medicines	**7,618**	**-8.2%**	**1,458**	**-13.7%**	**2,232**	**-7.6%**	**3,928**	**-6.5%**
Diabetes	2,476	-3.4%	766	-17.7%	618	-0.5%	1,092	+7.0%
Cardiovascular and Established Rx Products	5,142	-10.3%	692	-8.8%	1,614	-10.0%	2,836	-10.9%
Vaccines	**1,836**	**-2.0%**	**491**	**-21.3%**	**281**	**-11.4%**	**1,064**	**+13.3%**
Consumer Healthcare	**2,324**	**-1.6%**	**583**	**-5.2%**	**717**	**-2.8%**	**1,024**	**+1.2%**
Total net sales	**17,180**	**+1.6%**	**5,880**	**+6.2%**	**4,345**	**-2.1%**	**6,955**	**+0.4%**

Source: Sanofi

Main R&D and regulatory changes in 2Q20:

- Dupixent approved in China for moderate to severe atopic dermatitis in adults.
- Dupixent approved in US for moderate to severe atopic dermatitis in children (6-11 years old).
- Sarclisa approved in Europe for certain adults with relapsed and refractory multiple myeloma.
- Libtayo showed clinically meaningful and durable responses in advanced basal cell carcinoma.
- FDA granted priority review to sutimlimab in cold agglutinin disease.
- Collaboration agreements with Translate Bio, Kiadis Pharma and Kymera Therapeutics.

Guidance

For 2020, Sanofi anticipates an EPS between +6% to +7% at CER, with a possible currency negative impact between -3% to -4%.

Source: Sanofi

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Covid-19 vaccine

Sanofi is currently developing 2 vaccines for Covid-19:

- **Recombinant protein-based vaccine in partnership with GlaxoSmithKline:** Currently in 1 / 2 clinical trials and waiting for positive date in order to move to phase 3 trials at end of 2020. If results are positive the companies may ask for regulatory approval in 1H 2021.

- **mRNA vaccine in partnership with Translate Bio:** Expected to begin phase 1 / 2 of clinical trials in November with earliest potential approval in 2H2021.

CEO Paul Hudson's interview related with Covid-19 vaccine in September 2020 for LinkedIn News (paraphrasing):

Q: Alliance for the vaccine?
A: There is collaboration between companies and we are sharing data between ourselves and work together in EU and worldwide. This is the highest amount of team work between the industry that I have seen.

Q: Timeline?
A: Usually takes 10 years to develop a vaccine, and we are trying to do it in about a year, and if in end of year we have positive data, next year we will be able to deliver them.

Q: How is it possible for the vaccine to be developed so fast?
A: Due to collaboration between companies and regulators cooperation and openness. In matters which usually the regulators would take a week to reply we now have a much faster answer. We are not compromising safety but in terms of advocacy regarding what effects vaccine may have in 3 or 5 years we are not sure given there was no time to explore that.

Q: Price?
A: We committed since the beginning to make a vaccine affordable. We make for example the polio vaccine available and affordable for patients that needed it.

Q: Ramp up production?
A: We have about 10 thousand people in the vaccine division and we produce around 1bn doses of vaccines per year. The difference with Covid-19 is that we manufacture at risk because we will manufacture doses before having the final results in collaboration. If not successful the vaccines have to be destroyed. This is similar to other companies that are developing now a vaccine for Covid-19.

Q: Distribution agreements?
A: We tried to make sure that all regions know how to get the vaccines and we are negotiating with them in order to supply them. How distribution will be made will be up to EU and WHO, which will make sure everyone gets the opportunity to take the vaccine.

Q: If vaccine will be available next year how do you make sure it is safe for long term?
A: We know that by the time we get the data for the vaccine we will be very comfortable with regulators regarding safety of vaccine and effectiveness of the vaccine for several months. We do not know if it is going to be seasonal and regarding the multi-year advocacy regarding the possible safety.

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Source: Sanofi

Management Team

Paul Hudson (CEO): Joined Sanofi as CEO in September of 2019, after being CEO of Novartis since 2016. Previously, Paul held senior positions in AstraZeneca and as sales and marketing in GlaxoSmithKline. He holds a degree in economics from Manchester University and has a diploma in Marketing from the Chartered Institute of Marketing in UK.

Leadership style and strategy:

- In interviews, Paul makes clear that it is **essential that everyone at Sanofi knows the company's strategy** and it is focused on fulfilling that.
- He also highlights that there is a **need to continually give more responsibility to employees** and let them be decision makers.
- Focus also on granting that Sanofi **main purpose is to transform, change and save lives.**
- **The Covid-19 situation was for Paul humbling** as he did not have the answers and had to learn in the process.
- Wants to **develop Sanofi into a more digitalized company.**
- In Capital Market Day said he intends to **decrease bureaucracy** in the company and **implement prioritization** which was lacking.

Main moves since Paul begun his mandate:

- In January 2020, Hudson fulfilled the promise to **shrink executive committee from 14 to 10 people** by letting go Ameet Nathwani (chief medical officer since 2016 and chief digital officer since last year being responsible for partnership with Google), Dieter Weinand (head of primary care), Dominique Carouge (head of business transformation) and Kathleen Tregoning (external affairs chief).
- Directed **cash flow from diabetes and cardiovascular treatments to high growth areas** such as immunology, cancer and rare diseases.

Glassdoor ratings:

Pros

"Great work life balance; great benefits; competitive salary" (in 239 reviews)

"great benefits working here at Genzyme" (in 224 reviews)

"Open and warm culture - nice colleagues - good benefits - good work life balance" (in 189 reviews)

"A very diverse and inclusive work environment" (in 153 reviews)

"Great people And a great cafeteria" (in 120 reviews)

Cons

"Work environment depends on the culture of the upper management" (in 102 reviews)

"Company culture; Office politics; Work-life balance;" (in 87 reviews)

"Top down culture from french heritage" (in 78 reviews)

"Bureaucracy complex in decision making" (in 57 reviews)

"senior management needs to improve somewhat" (in 54 reviews)

Olivier Brandicourt (former-CEO): In February 2015 was appointed as CEO of Sanofi, designing the **2020 strategic plan which objective is to focus Sanofi in 3 portfolios: Diabetes, cardiovascular** and vaccines. **His predecessor was fired after Sanofi's board accusing it of going behind their backs with a plan for mass-layoffs in France, which would be a political disaster.** Between 2013 and 2015 Olivier was CEO and Chairman of Bayer Healthcare.

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Main segments

Drug Sales (€ million)	2018	2019	Growth in 2019 %	Weight 2019
Aubagio	1.647	1.879	14%	5%
Lemtrada	402	281	-30%	1%
Total Multiple Sclerosis	**2.049**	**2.160**	**5%**	**6%**
Cerezyme	711	708	0%	2%
Cerdelga	159	206	30%	1%
Myozyme	840	918	9%	3%
Fabrazyme	755	813	8%	2%
Aldurazyme	206	224	9%	1%
Other Rare Diseases products	287	296	3%	1%
Total Rare Disease	**2.958**	**3.165**	**7%**	**9%**
Taxotere	166	173	4%	0%
Jevtana	422	484	15%	1%
Eloxatine	182	203	12%	1%
Thymoglobulin	297	354	19%	1%
Mozobil	171	198	16%	1%
Other Oncology	256	283	11%	1%
Total Oncology	**1.494**	**1.695**	**13%**	**5%**
Dupixent	788	2.074	163%	6%
Kevzara	83	185	123%	1%
Total Immunology	**871**	**2.259**	**159%**	**6%**
Alprolix	285	412	45%	1%
Eloctate	608	684	13%	2%
Cablivi	4	56	1300%	0%
Total Hemophilia Rare Blood Diso	**897**	**1.152**	**28%**	**3%**
Sanofi Genzyme (Specialty Care)	**8.269**	**10.431**	**26%**	**29%**
Lantus*	3.565	3.012	-16%	8%
Apidra	357	344	-4%	1%
Amaryl*	335	334	0%	1%
Admelog	93	250	169%	1%
Toujeo	840	883	5%	2%
Other Diabetes	282	290	3%	1%
Total Diabetes	**5.472**	**5.113**	**-7%**	**14%**
Multaq	350	347	-1%	1%
Praluent	261	258	-1%	1%
Total Cardiovascular	**611**	**605**	**-1%**	**2%**
Diabetes & Cardiovascular	**6.083**	**5.718**	**-6%**	**16%**
Plavix*	1.440	1.334	-7%	4%
Lovenox*	1.465	1.359	-7%	4%
Renagel / Renvela*	411	311	-24%	1%
Aprovel*	652	674	3%	2%
Allegra*	124	128	3%	0%
Myslee / Ambien / Stilnox*	231	219	-5%	1%
Synvisc / Synvisc One	313	309	-1%	1%
Depakine	452	476	5%	1%
Tritace	221	218	-1%	1%
Other Rx Drugs	3.534	3.456	-2%	10%
Total Established Rx Products	**8.843**	**8.484**	**-4%**	**23%**
Generics	**1.490**	**1.075**	**-28%**	**3%**
General Medicines & EM	**10.333**	**9.559**	**-7%**	**26%**
Total Pharmaceuticals	**24.685**	**25.708**	**4%**	**71%**
Allergy, Cough and Cold	1.124	1.179	5%	3%
Pain	1.254	1.259	0%	3%
Digestive	986	1.004	2%	3%
Nutritional	675	657	-3%	2%
Others	621	588	-5%	2%
Consumer Healthcare	**4.660**	**4.687**	**1%**	**13%**
Polio / Pertussis / Hib	1.749	1.946	11%	5%
Adult Booster Vaccines	470	563	20%	2%
Meningitis/Pneumonia	609	682	12%	2%
Influenza Vaccines	1.708	1.891	11%	5%
Travel And Other Endemics Vacc	488	539	10%	1%
Other Vaccines	94	110	17%	0%
Vaccines	**5.118**	**5.731**	**12%**	**16%**
Total Company	**34.463**	**36.126**	**5%**	**100%**

Source: Sanofi

Note: * drugs suffering competition from generics and biosimilars in 2019 and 2020

Multiple Sclerosis:

MS is an autoimmune disease in which a person's immune system attacks the central nervous system causing a break in communication between the brain and the rest of the body. There are more than 2.5mn people with MS in the world.

Aubagio (teriflunomide): Has shown significant efficacy in slowing the progression of physical disability, in reducing relapses and brain lesions. It is an oral compound (pyrimidine synthesis inhibitor) which inhibits a key enzyme required by white blood cells reducing the proliferation of T and B immune cells that are active in MS. FDA approved its use in 2012 and has now been approved in more than 70 countries. The **generic versions are expected to reach the US market in 2023**.

Lemtrada (alemtuzumab): Due to its safety profile is only recommended for patients that did not had success with other MS drugs. It is given by IV infusion as two short courses 12 months apart. Is a humanized monoclonal antibody directed at CD52 (a protein on the surface of immune cells). Sanofi pays Bayer Healthcare a portion of alemtuzumab global sales.

Rare Diseases:

Myozyme (aglucosidase alfa)**:** Enzyme replacement therapies used to treat Pompe disease, a lysosomal storage disorder (LSD) which is a metabolic disorder caused by enzyme deficiencies. This rare condition occurs in one in 40,000 newborns worldwide. This therapy has been marketed since 2006 in US and has been approved in more than 70 countries.

Cerezyme (imiglucerase): Used to treat Gaucher disease, an inherited and life-threatening LSD. It occurs in one of 120 thousand newborns. Marketed in US since 1994, EU since 1997 and China since 2008.

Cerdelga (eliglustat): Oral therapy for adult Gaucher patients, approved in 2014 in US.

Fabrazyme (algasidase beta): Used to treat Fabry disease, a life-threatening LSD. Occurs in approximately one in 35 thousand newborns. Marketed in EU since 2001 and US since 2003.

Oncology:

Jevtana (cabazitaxel): Is a chemotherapy drug and cytotoxic agent, that prevents cancer cells form dividing and is used to treat prostate cancer. It was approved in 2010 by FDA and in 2011 in Europe. Sanofi holds the patent of this drug until 2031.

Thymoglobulin (anti-thymocyte Globulin): In US is indicated for treatment of acute rejection in patients receiving a kidney transplant. Outside US is also indicated for acute rejection of other organ transplants, aplastic anemia and for Graft-versus-Host disease. It is a polyclonal anti-human thymocyte antibody.

Taxotere (docetaxel): Approved for 11 indications in five different tumor types (breast, prostate, gastric, lung and head and neck). Generics of the drug have been launched globally. It is a chemotherapy drug and cytotoxic agent, being a semi-synthetic taxane.

Eloxatin (oxaliplatin): Approved by FDA for adjuvant treatment of people with stage III colon cancer who have had their primary tumors surgically removed.

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Dupixent for atopic dermatitis:

Opportunity to increase uptake and expand to pediatric segments
U.S. population by age group (patients in '000, approximate)[2]

	Adults	12-17Y	6-11Y[6]	<6Y[6]
Prevalence	8,200	2,500	2,500	2,400
Moderate-to-severe	2,600	800	700	700
Biologics eligible[4]	1,700	400	90	75
Dupixent®	**59[5]**	**5[5]**	Submission: 2019e	2022e
Share of Biologics eligible	3.5%	1.3%		

Dupixent for asthma market:

Expanding biologics market, gaining share and seeking pediatric indication
U.S. population by age group (patients in '000, approximate)[2]

	Adults/ 12-17Y	6-11Y[6]
Prevalence	23,500	2,400
Moderate-to-severe[3]	1,600	200
Biologics eligible[4]	900	75
Treated on biologics	118	3
Dupixent®	**11[5]**	Submission 2021e
Share of Biologics eligible	1.2%	
Share of Biologics class	9.0%	

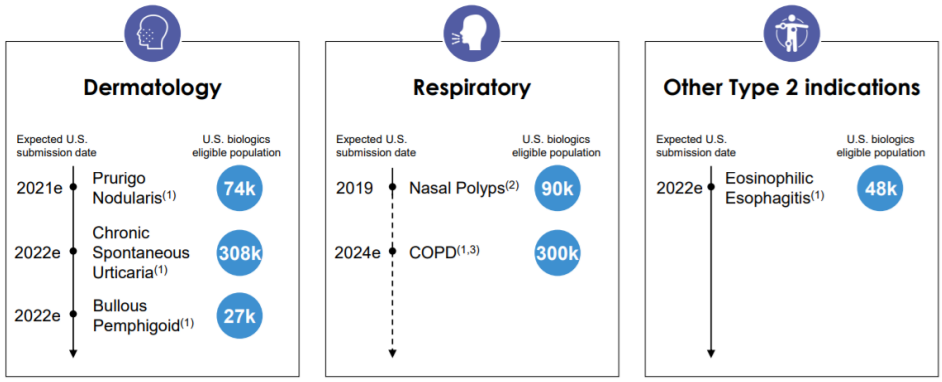
Source: Sanofi

Immunology:

In this segment Sanofi treats conditions in which the immune system is not functioning properly such as Asthma (respiratory condition), Chronic Rhinosinusitis (nasal congestion for >12 weeks), Atopic Dermatitis (skin inflammation) or rheumatoid arthritis (joints problems).

Dupixent (dupilumab): This new immunology drug is one of the growth forces of Sanofi's pipeline, with CEO Hudson stating that it could reach more than EUR 10bn in sales per year. This medicine can be self-administered through a subcutaneous injection, and is composed by a human monoclonal antibody which binds to the interleukin-4 receptor (IL-4R) which has been shown to inhibit overacting signaling of proteins IL-4 and IL-13, which are believed to be the cause of multiple diseases with Type 2 signatures such as allergic, atopic and inflammatory disorders:

- Approved in 2017 by FDA to treat adults with moderate to severe **atopic dermatitis**. In 2019 was extended to adolescents and 2020 for children (6-11 years old). Annual cost around USD 33,000.
- Approved for adults in **China** for severe atopic dermatitis in mid-2020. Price of annual treatment is around CNY 22,000 (USD 3,300).
- In Europe, CHMP gave recommendation for approval for severe **atopic dermatitis** in children aged 6 to 11 years.
- FDA has approved its label extension for patients with **asthma** with sales starting in 4Q18 and in Europe in May 2019.
- In 2019, FDA and Europe approved Dupixent for patients with **chronic rhinusitis** with nasal polyposis.



Source: Sanofi

Kevzara (sarilumab): This drug inhibits a cytokine in the body that in excess and over time contributes to inflammation associated with **rheumatoid arthritis.** It is a human monoclonal antibody that binds to the interleukin-6 receptor (IL-6R) inhibiting its mediated signaling. Was approved in 2017 by FDA and Europe. Sanofi and Regeneron partnership was simplified, so Sanofi will retain global rights for Kevzara and ex-US rights for Praluent.

Hemophilia:

This segment was created following the acquisition of Bioverativ and Ablynx in 2018. Deals with blood disorders.

Eloctate: This is a Bioverativ drug to treat hemophilia A which competes with Roche's Hemlibra. Sanofi wrote down in USD 2bn of value of this medicine due to higher competitive pressures from Hemlibra which led to lower revenue projections.
Hemophilia A is a rare, x-linked genetic bleeding disorder resulting in a prolonged patient plasma-clotting time, characterized by the deficiency of the functional coagulator Factor VIII. Eloctate temporarily substitutes the Factor VIII. Is marketed in US since 2014.

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Alprolix (coagulation Factor IX): Used to control and prevent bleeding incidents in adults and children with hemophilia B. Hemophilia B is similar to A given that its characterized by a prolonged clotting time but is less common. Marketed in US since 2014.

Cablivi (caplacizumab): Used to treat adults with an episode of acquired thrombotic thrombocytopenic purpura (aTTP). It is a life-threatening autoimmune-based blood clotting disorder characterized by extensive clot formation in small blood vessels throughout the body. Cablivi was approved in EU in 2018 and in US in 2019. There are 1.5 to 6 cases per million people in Europe.

Diabetes:

Diabetes are characterized by high levels of sugar in blood. Insulin is a hormone that helps sugar in blood to get into cells in order to produce energy. A patient with diabetes type 1 is unable to produce insulin while a patient with type 2 produces lower quantities. The type 2 is the most common. Too much sugar in blood may cause damage to eyes, nerves and kidneys, and heart diseases or strokes.

Lantus: Is a long-acting analog of human insulin for the once a day treatment of patients with type 2 diabetes who require basal insulin for the control of hyperglycemia with 16 years of clinical evidence. Is available in more than 130 countries. Eli Lilly launched a biosimilar of Lantus in Europe with the name Abasaglar in 2015, and in US in 2016 (price around 15% lower). Sanofi has ongoing patent infringement proceedings with Merck and Mylan for their alternatives to Lantus which are being reviewed by the FDA.

Toujeo: is similar to Lantus but capable of delivering the same number of insulin units with a third of the injection volume (disposable prefilled pen containing 450 units of insulin glargine). Was authorized by the FDA and Europe in 2015. In 2020 was approve in Europe for treatment of adolescents and children (>6 years older).

Apidra (insulin glulisine): Is a rapid-acting analog of human insulin for supplementary glycemic control at meal times.

Admelog: A rapid-acting insulin, approved in US and Europe in 2017 to improve blood sugar control in patients with type 2 diabetes.

Amaryl (glimepiride): Orally administered once a day indicated as an adjunct to diet and exercise to improve glycemic control in patients with type 2 diabetes. There are generic versions in the market.

Cardiovascular:

Cardiovascular diseases are the leading cause of death worldwide and 90% can be prevented through healthy eating, exercise, avoidance of tobacco and limited alcohol intake.

Praluent (alirocumab): This self-administered injection every two weeks helps adults with uncontrolled low-density lipoprotein (LDL) cholesterol. It was approved in US and Europe in 2015 and was developed and commercialized with Regeneron. In March 2019 a 60% price reduction was launched for Medicare patients in US. Amgen is in legal proceedings against Sanofi and Regeneron regarding patents to this drug. Sanofi and Regeneron partnership was simplified, so Sanofi will retain global rights for Kevzara and ex-US rights for Praluent.

Multaq (dronedarone): Approved in US and Europe in 2009, this drug is for prevention of atrial fibrillation recurrences (rapid and irregular heart beat).

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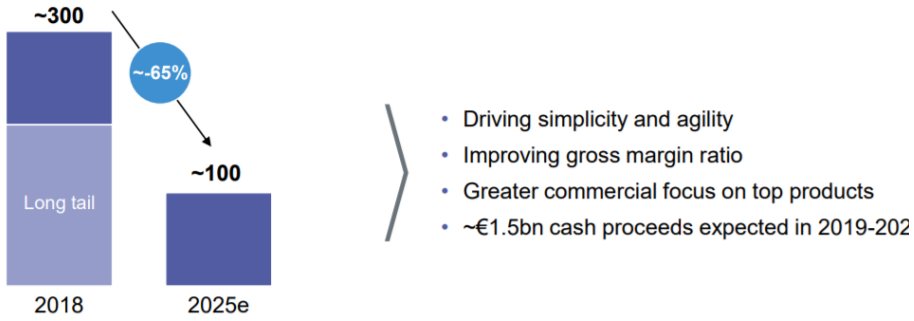
Established RX (prescription) Products:

These are prescription drugs in use for quite some time that already face competition form generics. Sanofi intends to streamline this division by decreasing in 65% the number of products. This process will be done by ending or divesting multiple products that have a low proportion of sales (60% of current products have EUR 1 mn or less in annual sales).

Number of product families



Source: Sanofi

Plavix: Is indicated for the prevention of atherothrombotic events in patients with a history of recent myocardial infarction, recent ischemic stroke or established peripheral arterial disease. Is marketed in more than 80 countries, however a number of generic versions have been launched in Europe, US and other markets.

Lovenox: Has a favorable risk-benefit ratio in the prophylaxis and treatment of venous thromboembolism and in the treatment of acute coronary syndrome. It is marketed in more than 100 countries, however several versions of generics are already being sold.

Generics:

On September 2018, Sanofi divested European generics Zentiva to Advent International but kept the emerging markets generics business. Its presence is mainly in Latin America through Medley (Brazil) and Genfar (Colombia, Peru, Ecuador and Central America). It is also present in Russia, South Africa and Turkey.

Consumer Healthcare:

In 2019, Sanofi announced that CHC would be a standalone business unit with integrated R&D and manufacturing function plus dedicated support for IT.
After acquiring the division from Boehringer's, Sanofi markets now the drugs for:

- **Allergies, cough and cold:** Allegra, Xyzar and Mucosolvan.
- **Pain relief:** Doliprane and Buscopan range.
- **Digestive segment:** Dulcolax, Enterogermina, Essentiale and Zantac.
- **Nutrition segment:** Pharmaton.
- **Eczema:** Gold Bond in US.
- **Influenza:** Tamiflu, after signing an agreement with Roche for its rights in 2019.

Vaccines:

Sanofi had since 1994 a joint venture with Merck & Co. in the vaccines segment, however this partnership was terminated in the end of 2016. Vaccine sales are seasonally much stronger in the second half of the year.

- **Polio, Pertussis and Hib pediatric:** Pentaxim, Hexaxim, Pentacel, Quadracel, Shan5 and Vaxelis.
- **Influenza**: Fluzone and Vaxigrip.

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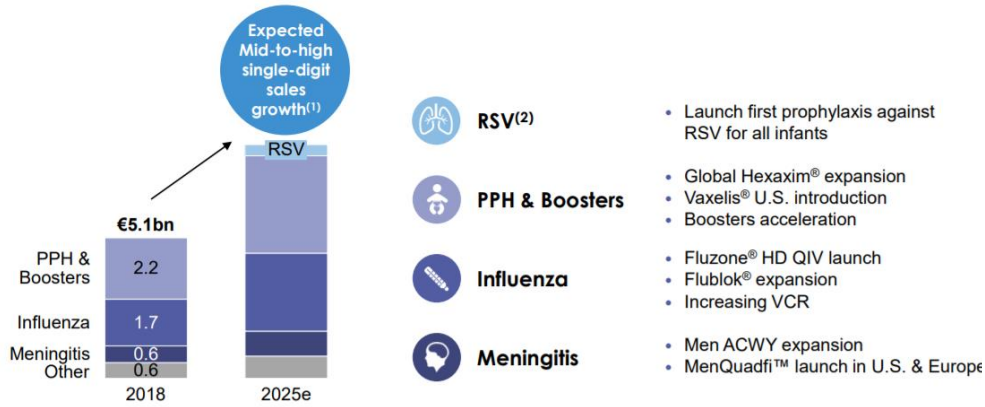
- **Adult booster**: Adacer and Repevax.
- **Meningitis**: Menactra.
- **Travel and endemic diseases:** Dengvaxia.



Source: Sanofi

Latest approvals

In 2019 Sanofi got approvals for:

- **Cablivi** approved in US in association with plasma exchange and immune-suppression for the treatment in adults of thrombotic thrombocytopenic purpura (aTTP).
- **Dupixent** was approved in Europe and US for treatment of severe atopic dermatitis in adolescents and for treatment of severe nasal polyps.
- **Dupixent** was approved in Europe for treatment of severe asthma.
- **Praluent,** the US FDA and Europe approved a new indication to reduce cardiovascular risk in adults with established atherosclerotic cardiovascular disease.
- **Libtayo** was granted conditional marketing approval in Europe in the treatment of advanced cutaneous squamous cell carcinoma.

Products	Expected milestones	Timing
SERD '859	Proof of concept study read-out in Breast Cancer (combo, adj.)	H2 2020
sutimlimab	U.S. regulatory decision in Cold Agglutinin Disease	H2 2020
Flublok®	EU regulatory decision for > 18-year old age group	H2 2020
Dupixent®(2)(**)	Pivotal trial read-out in Asthma for 6-11 year old age group	H2 2020
Sarclisa®	U.S. regulatory decision in Refractory Multiple Myeloma (IKEMA)	H1 2021
Baculovirus recombinant vaccine(**)(3)	Regulatory decision in COVID-19	H1 2021
MenQuadfi™	EU regulatory decision for ≥ 12-month old age group	H1 2021
Shan 6	DCGI regulatory decision	H1 2021
fitusiran	Pivotal trial read-out in Hemophilia A / B	H1 2021
SERD '859	Pivotal trial read-out in 2L / 3L Breast Cancer (mono.)	H1 2021
SAR442720(**)(1)	Proof of concept study read-out in solid tumor in combination with cobimetinib	H1 2021
venglustat	Proof of concept study read-out in Glucocerebrosidase Parkinson's Disease	H1 2021
ST400(**)(4)	Proof of concept study read-out in Beta thalassemia	H1 2021
BIVV003(**)(4)	Proof of concept study read-out in Sickle Cell Disease	H1 2021

(1) Developed in collaboration with Revolution Medicines
(2) Developed in collaboration with Regeneron
(3) Developed in collaboration with GSK and with funding from Biomedical Advanced Research and Development Authority (BARDA)
(4) Developed in collaboration with Sangamo
(**) Partnered and/or in collaboration – Sanofi may have limited or shared rights on some of these products
DCGI: Drug Controller General of India

Source: Sanofi

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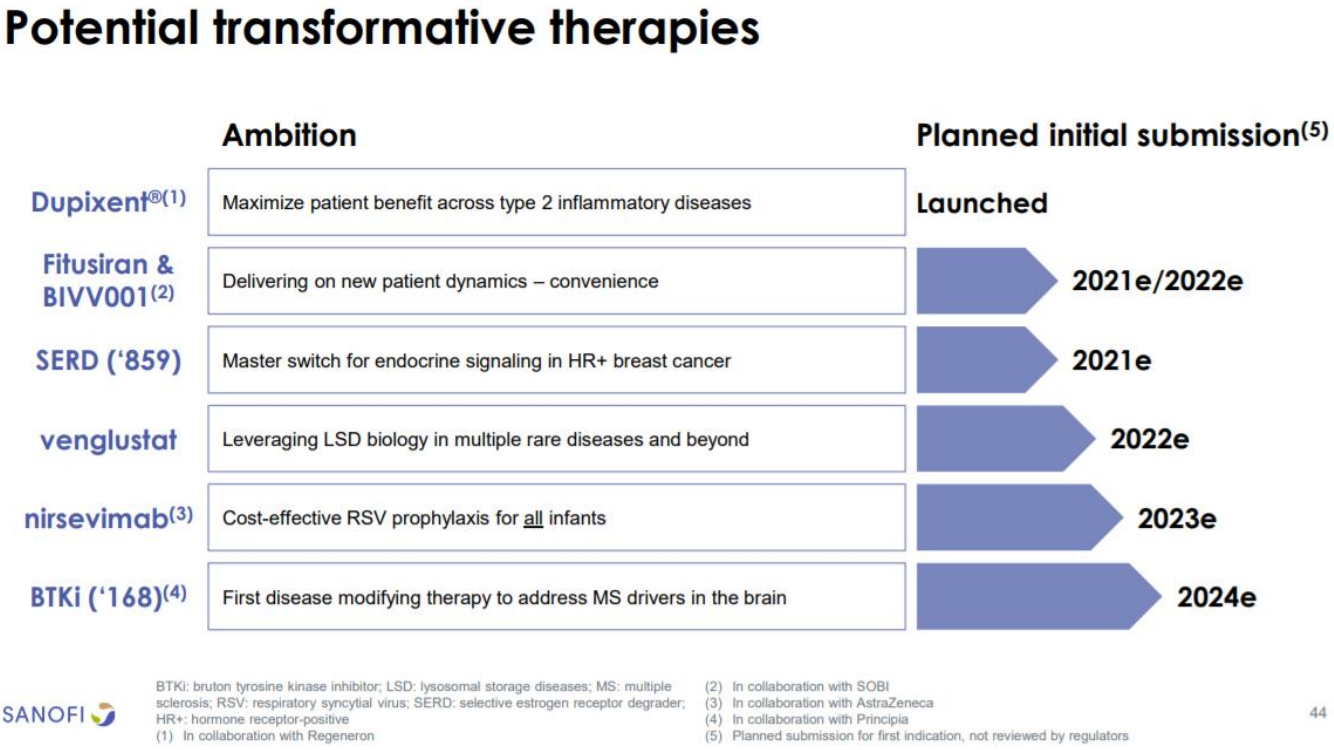
Latest developments in R&D



Source: Sanofi

In 2019 Sanofi:

- Launched Phase II study of **SAR439859** for breast cancer
- Launched Phase III of **Libtayo** (cemiplimab) for cutaneous squamous cell carcinoma.
- Launched Phase III of **venglustat** for kidney disease (ADPKD).
- Launched Phase III of **BIVV001**, a recombinant coagulation factor for patients with hemophilia A.
- Launched Phase III of **SAR408701** an antibody for non-small-cell lung cancer.
- Launched Phase III of **Dupixent** (dupilumab) for chronic obstructive pulmonary disease.
- Launched Phase III of **vaccine Shan6** for diphtheria, tetanus, pertussis, polio, hepatitis B and Hemophilus influenzae B.
- Launched Phase III of **monoclonal antibody nirsevimab** (collaboration with Medimmune) for prevention of respiratory syncytial virus (RSV)
- Launched Phase III of vero-cell rabies **vaccine VerorabVax.**

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M&A

Acquisition of Principia Biopharma (2020): To strengthen the R&D areas of autoimmune and allergic diseases, Sanofi acquired Principia Biopharma in middle of 2020 for an equity value of USD 3.68 bn. Sanofi will gain full control of brain-penetrant BTK inhibitor SAR442168 for Multiple Sclerosis and may expand this program to other central nervous system diseases and therapeutic areas. The clinically advanced oral BTK inhibitor will also be added to Sanofi's R&D pipeline with potential for a range of immunology and inflammation indications.

Acquisition of Synthorx (2020): Sanofi completed this deal in January 2020 for USD 2.5 bn. Synthorx is a biotechnology company developing treatments for prolonging and improving lives of patients with cancer and autoimmune disorders.

Sale of Zentiva (generics, 2018): Sanofi announced in 2Q18 that it was in exclusive talks with Advent for the sale of its European generic business, Zentiva. The sale was concluded in September of 2018 for EUR 1.9bn, generating a pre-tax gain of EUR 510 mn.

Purchase of Bioverativ (2018): In March of 2018, Sanofi concluded the purchase of Bioverativ, a US hemophilia specialist for USD 11.6bn, in order to complement its portfolio of rare diseases. It was consolidated in March 2018. Sanofi recorded an impairment of EUR 2.8 bn related to this acquisition and the drug Eloctate of Bioverativ.

Purchase of Ablynx (2018): In May of 2018, Sanofi also bought Ablynx, a biotech firm developing an experimental drug for rare blood disorder, for EUR 3.9bn (goodwill of EUR 1.4bn). The transaction was closed in 2Q18 with full consolidation in beginning 2019.

Swap with Boehringer Ingelheim (2016): In 2016, the companies announced that they would swap their businesses, so that Sanofi would get Boehringer's consumer healthcare unit and in exchange would deliver its animal health business. The exchange was concluded in the beginning of 2017 and included a payment of EUR 4.7bn to Sanofi given that the value determined for Sanofi Animal Health was EUR 10.6 bn and for BI's Consumer Health was EUR 4.6 bn. The transaction generated an after-tax gain of EUR 4.6 bn for Sanofi.

Separation of European vaccines business with Merck Co (2016): This partnership was set up in 1994 as a 50/50 venture to develop and market vaccines in Europe. In 2016, both companies decided to split the business. At this time, this business generated for Sanofi less than a fifth of its total vaccine business revenues.

Acquisition of Genzyme (2011): Sanofi paid USD 20.1 bn (upped after first rejection of USD 18.5bn) for this American biotech, which was developing the drugs Lemtrada (MS), Cerezyme, Fabrazyme and Renagel. Genzyme generated in 2010 revenues of USD 4.1 bn and the CEO ended up quitting after the completion of the transaction as he didn't agree to sell. The CEO was facing investor pressure after the recent supply problems that led to a shortage of medicines and a 46% fall in the stock price. Sanofi included an extra USD 3.8 bn contingent value right for Genzyme shareholders in case Lemtrada and other drugs were successful. A group of shareholders initiated a lawsuit against Sanofi affirming that it promised to pay these rights on Lemtrada but at the same time was developing a competitor drug (Aubagio) that was approved much faster and consequently cannibalized Lemtrada sales. Sanofi had in 2019 to pay USD 315 mn to settle these claims, despite not admitting wrongdoing.

Acquisition of Aventis (2004): Aventis agreed to be acquired into the smaller competitor Sanofi for EUR 55 bn in cash and shares (the first bid was EUR 48 bn). This transaction was reported as an attempt of French government to create a national champion in healthcare.

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Collaborations with other companies

Regeneron: This partnership begun in 2003 and as part of the agreement Sanofi used to hold a 21.8% stake in Regeneron. In 2020 Sanofi sold the stake for USD 11.7 bn, retaining 400,000 shares of Regeneron.
In the beginning of 2019 both companies announced that there was a new structure for the collaboration:

- Give Sanofi more flexibility to advance its early stage **immune-oncology** pipeline independently, while Regeneron would retain all rights to its other development programs in immune-oncology.
- Simplification of antibody collaboration for Kevzara and Praluent, in which Sanofi will retain global rights for **Kevzara** and ex-US rights for **Praluent**.
- The collaborations regarding **Dupixent** and **SAR440340** will remain unchanged with a 50/50 agreement.

Alnylam: Both companies concluded the research and option phase of 2014's RNAi therapeutics alliance in rare genetic diseases. In this collaboration:

- The terms for the collaboration for **partisiran, vutrisiran** and **fitusiran** remain unchanged.
- Alnylam will advance with an **investigational asset of rare genetic disease** and Sanofi will be responsible for further developments or commercialization of this asset.
- Sanofi sold the equity interest in the company for EUR 706 mn.

Google: In 2019 Sanofi established a new Innovation Lab with Google to discover new ways of developing new treatments with 3 main objectives: better understand patients and diseases, increase Sanofi operational efficiency and improve experience of Sanofi's patients and customers.

Roche: In 2019 Sanofi created an agreement with Roche for the exclusive over the counter rights to **Tamiflu in US** for the prevention and treatment of influenza. Sanofi will be responsible for leading negotiations with FDA for OTC switch and subsequent marketing and distribution.

Lexicon: In 2019, following primary endpoint results of studies, Sanofi ended the collaboration to develop, manufacture and commercialize **Zynquista** in all Type 1 and Type 2 diabetes programs.

Abbott: Partnership to integrate sensing and insulin delivering technologies to simplify how people with diabetes manage their condition.

Sobi (Swedish Orphan Biovitrum): The partnership was initiated to develop the BIVV001, an investigational extended half-life factor VIII therapy for protection of patients with hemophilia A from bleeds with a once a week dose. Under the partnership, until 2027, if the EU approves BIVV001, Sobi will pay the balance of development costs (around USD 285 mn. Sobi will also pay royalties of 9% of sales in Sobi territory (Europe, North Africa, certain countries in Middle East and Russia), while Sanofi will pay 8% on direct sales in North America and 13% in other markets.

Translate Bio: In 2020 Sanofi expanded the partnership by making an upfront payment of USD 425 mn and committing to potential milestone payments of USD 1.9 bn and royalties if certain targets are achieved. Sanofi will have then worldwide rights to develop, manufacture and commercialize infectious disease vaccines using Translate Bio technology. These mRNA vaccines, which will be applied to Covid-19 and influenza among other diseases, have a high potency, have the capacity for rapid development and potential for low manufacturing costs and safe administration using non-viral delivery.

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Risks

Competition: Pharmaceutical companies are always subjected to competitive pressures of new drugs that are launched in the market. This will be reflected in the market price and may lead to a drop in margins.

- **Biosimilars competition:** These are the generic versions of more complex biological drugs. Generics are exact copies of small molecule drugs, which are relatively simple and cheap to copy and manufacture. Biosimilars on the other hand are copies of biological drugs which are based on gene and cell modification so depend majorly on the manufacturing process. For this reason, are much more expensive to create. While there is the risk that some biological products of Sanofi with patent expiring, may face competition from a biosimilar, due to its high costs, the price drop difference should not be as steep as it happens with generics. US and Europe are accelerating regulatory approvals of biosimilars.

- **Expiring patents:** When pharmaceuticals develop a new innovative drug, they may get several years in which patents protect competitors from replicating it. During this period the prices are naturally higher, while after, generic versions may appear that will be sold at lower prices and lead to a decline of Sanofi's sales of that drug.

Product Liability: When a drug is massified certain adverse effects may appear that were not detected in the extensive trials due to relative lower number of patients, different population characteristics, long term effects or rare conditions. As such, Sanofi routinely monitors its patients and if such adverse is found, label of the drug may be corrected. Still, the company may face significant product liability claims. Sanofi insures some of this possible risk, however product liability coverage is increasingly difficult and costly to obtain and may not cover all the costs associated. There were at end of 2019, EUR 1.34 bn in product liability provisions in Sanofi's balance sheet.

Investigations into compliance, competition, marketing or pricing: For example, in February of 2020 Sanofi settled with the US Department of Justice for USD 11.85 mn to resolve allegations regarding donations made by Sanofi to an independent patient assistance foundation that had patients being treated for Multiple Sclerosis. In 2017, Sanofi pledged to increase drug prices only by the official health inflation, projected at +5.4% due to increased pressure from Trump's administration for healthcare companies to limit price increases. In 2018 Sanofi presented a list of medicine prices in which stated that despite the average 4.6% increase in list prices of its drugs, the net received by the company dropped by 8% due to high rebates paid to insurers and other intermediaries of healthcare industry such as PBM.

US pricing pressure from MCO/PBM: Managed care organizations (MCO) and Pharmacy Benefit managers (PBM) are consolidating and gaining pricing power. This may put negative pressure in sales in US. As an example, in 2018 some MCO/PBM put in place restrictions on the usage of Praluent, resulting in more expenses for patients, so Sanofi had to decrease the price of this drug resulting in a sales decline of 30.5% in US in 2019.

Top 5 primary offense type	Total Penalty (USD mn)	# of records
Government contracting	489	15
Drug or medical equip. Safety violation	56	2
Price-fixing or anti-competitive practices	54	3
Foreign Corrupt Act	25	1
Employment discrimination	15	1

Source: ViolationTracker.GoodJobFirst.org

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Foreign Exchange: The devaluation of USD vs. EUR had a negative impact in 2018 sales of 4.2%. Sanofi covers foreign currency exposure with hedging instruments however it may not be able to cover completely its exposure.

Growth in Emerging Markets: Sanofi is growing revenues faster in Emerging Markets. If economic conditions in these markets deteriorate, it may dampen Sanofi's sales and consequently lead to negative growth of company sales.

Recent Acquisitions: The recent acquisitions led to an increase of debt in the balance sheet and consequently to higher interest costs. Still, Sanofi is classified by the main rating agencies as investment grade. Acquisitions may lead to high level of impairments if product sales do not meet initial estimates as for example the impairment of USD 2.8 bn of the drug Eloctate of Bioverativ (acquired by Sanofi for USD 11.6 bn).

Possible reshoring of drugs production, as stated publicly by Macron, that he would like to bring medicines production back to Europe so France is not dependent on other countries.
Paul Hudson, CEO replied: President Macron is right that healthcare sovereignty is a region priority and he understand the competitive advantage of producing in other countries. We saw that during pandemic as other countries shut the borders, there were supply problems. We believe that having a supply of essential medicines in Europe makes sense.
It will take some collaboration in Europe so that we achieve that. Nowadays over 60% of main medicine ingredients are made in China or India, so it is important that Europe and US have access to essential medicines.

Relative Valuation

Comparison between healthcare industry companies is not easy as different companies have different drugs for several diseases and their pipeline (future growth) may not be similar. Still, Sanofi has currently a lower P/E ratio vs the average companies in the table below and a lower net debt/EBITDA. This theoretical discount may be related to a less confidence from the market towards growth perspectives of the company.

Name	Country	Market Cap (mn)	Currency	P/E 2020E	YTD	Div. Yield	ROE	NetDebt/ EBITDA	Margin EBITDA
ASTRAZENECA PLC	BRITAIN	110.587	GBp	27,0	10,8%	2,6%	17%	1,8	30%
NOVO NORDISK A/S-B	DENMARK	1.066.900	DKK	25,3	17,4%	1,9%	73%	-0,3	48%
GLAXOSMITHKLINE PLC	BRITAIN	72.621	GBp	12,4	-18,6%	5,5%	78%	2,6	26%
ROCHE HOLDING AG-GENUSSCHEIN	SWITZERLAND	277.215	CHF	16,1	2,3%	2,8%	44%	0,4	36%
NOVARTIS AG-REG	SWITZERLAND	199.659	CHF	15,4	-11,9%	3,6%	14%	2,0	29%
ELI LILLY & CO	UNITED STATES	148.922	USD	21,5	18,5%	1,8%	163%	2,0	30%
SANOFI	FRANCE	108.823	EUR	14,7	-3,5%	3,6%	18%	0,5	41%
Average exc. Sanofi				19,6	3,1%	3,0%	65%	1,4	33%

Source: BiG Research

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Annexes

Sanofi Sales 2019/18

(€ million)	Europe[a]			United States			Rest of the world[b]			Emerging markets[c]			Total Franchise			
	2019	2018	Change at CER	2019	2018	Change at CER	2019	2018	Change at CER	2019	2018	Change at CER	2019	2018	Change on a reported basis	Change at CER
Aubagio®	412	385	+7.0%	1,351	1,157	+10.8%	61	57	+3.5%	55	48	+20.8%	1,879	1,647	+14.1%	+10.0%
Lemtrada®	94	167	-43.7%	151	189	-24.3%	11	19	-47.4%	25	27	+3.7%	281	402	-30.1%	-31.6%
Total Multiple Sclerosis	**506**	**552**	**-8.3%**	**1,502**	**1,346**	**+5.9%**	**72**	**76**	**-9.2%**	**80**	**75**	**+14.7%**	**2,160**	**2,049**	**+5.4%**	**+1.8%**
Cerezyme®	246	270	-8.9%	184	174	+0.6%	33	37	-13.5%	245	230	+20.4%	708	711	-0.4%	+2.7%
Cerdelga®	73	51	+43.1%	118	98	+14.3%	10	7	+42.9%	5	3	+100.0%	206	159	+29.6%	+26.4%
Myozyme®	382	374	+1.9%	331	284	+10.6%	59	58	—	146	124	+26.6%	918	840	+9.3%	+8.3%
Fabrazyme®	184	175	+5.1%	410	383	+1.6%	121	115	+0.9%	98	82	+29.3%	813	755	+7.7%	+5.3%
Aldurazyme®	78	76	+1.3%	51	44	+11.4%	25	24	+4.2%	70	62	+19.4%	224	206	+8.7%	+9.2%
Other	64	62	+3.2%	89	89	-6.7%	93	95	-5.4%	50	41	+26.8%	296	287	+3.1%	+0.7%
Total Rare Diseases	**1,027**	**1,008**	**+1.9%**	**1,183**	**1,072**	**+4.7%**	**341**	**336**	**-2.1%**	**614**	**542**	**+24.0%**	**3,165**	**2,958**	**+7.0%**	**+6.5%**
Jevtana®	168	158	+7.0%	212	179	+12.3%	78	62	+17.7%	26	23	+13.0%	484	422	+14.7%	+11.1%
Thymoglobulin®	36	37	—	198	162	+16.0%	24	23	—	96	75	+30.7%	354	297	+19.2%	+16.5%
Eloxatin®	2	2	—	(6)	—	—	26	30	-13.3%	181	150	+19.3%	203	182	+11.5%	+10.4%
Mozobil®	49	47	+4.3%	115	96	+14.6%	20	18	-5.6%	14	10	+50.0%	198	171	+15.8%	+11.7%
Taxotere®	4	3	+33.3%	(1)	1	-200.0%	26	28	-3.6%	144	134	+5.2%	173	166	+4.2%	+3.0%
Other	115	104	+9.6%	95	85	+5.9%	44	40	+2.5%	29	27	+11.1%	283	256	+10.5%	+7.4%
Total Oncology	**374**	**351**	**+6.8%**	**613**	**523**	**+11.3%**	**218**	**201**	**+3.0%**	**490**	**419**	**+16.7%**	**1,695**	**1,494**	**+13.5%**	**+10.6%**
Dupixent®	200	75	+165.3%	1,669	660	+140.8%	176	48	+247.9%	29	5	+460.0%	2,074	788	+163.2%	+151.6%
Kevzara®	43	14	+207.1%	115	64	+70.3%	25	5	+380.0%	2	—	—	185	83	+122.9%	+114.5%
Total Immunology	**243**	**89**	**+171.9%**	**1,784**	**724**	**+134.5%**	**201**	**53**	**+260.4%**	**31**	**5**	**+500.0%**	**2,259**	**871**	**+159.4%**	**+148.1%**
Eloctate®	—	—	—	517	500	-2.0%	147	106	+31.1%	20	2	+850.0%	684	608	+12.5%	+6.6%
Alprolix®	—	—	—	300	222	+27.9%	111	63	+68.3%	1	—	—	412	285	+44.6%	+37.2%
Cablivi®	22	4	+450.0%	34	—	—	—	—	—	—	—	—	56	4	—	—
Total Rare Blood Disorders	**22**	**4**	**+450.0%**	**851**	**722**	**+11.8%**	**258**	**169**	**+45.0%**	**21**	**2**	**+900.0%**	**1,152**	**897**	**+28.4%**	**+22.0%**
Sanofi Genzyme (Specialty Care)	**2,172**	**2,004**	**+8.4%**	**5,933**	**4,387**	**+28.4%**	**1,090**	**835**	**+24.7%**	**1,236**	**1,043**	**+24.4%**	**10,431**	**8,269**	**+26.1%**	**+22.7%**
Lantus®	584	684	-14.6%	1,149	1,614	-32.5%	218	290	-26.6%	1,061	977	+9.7%	3,012	3,565	-15.5%	-17.0%
Toujeo®	334	290	+15.5%	289	344	-20.3%	80	76	+1.3%	180	130	+39.2%	883	840	+5.1%	+3.2%
Apidra®	129	136	-5.1%	46	74	-41.9%	39	38	—	130	109	+22.9%	344	357	-3.6%	-3.6%
Amaryl®	15	17	-11.8%	2	2	—	24	28	-17.9%	293	288	—	334	335	-0.3%	-2.1%
Admelog®	15	7	+114.3%	235	86	+158.1%	—	—	—	—	—	—	250	93	+168.8%	+155.9%
Other	131	138	-5.1%	90	65	+32.3%	32	29	+3.4%	37	50	-22,0%	290	282	+2.8%	+1.4%
Total Diabetes	**1,208**	**1,272**	**-5.0%**	**1,811**	**2,185**	**-21.5%**	**393**	**461**	**-17.1%**	**1,701**	**1,554**	**+10.3%**	**5,113**	**5,472**	**-6.6%**	**-8.2%**
Praluent®	107	86	+24.4%	112	154	-30.5%	18	10	+70.0%	21	11	+81.8%	258	261	-1.1%	-3.8%
Multaq®	40	43	-7.0%	295	296	-5.4%	4	4	—	8	7	+14.3%	347	350	-0.9%	-5.1%
Total Cardiovascular	**147**	**129**	**+14.0%**	**407**	**450**	**-14.0%**	**22**	**14**	**+50.0%**	**29**	**18**	**+55.6%**	**605**	**611**	**-1.0%**	**-4.6%**
Plavix®	139	147	-4.8%	—	—	—	199	218	-12.4%	996	1,075	-8.6%	1,334	1,440	-7.4%	-8.8%
Lovenox®	709	870	-18.4%	33	38	-18.4%	75	81	-8.6%	542	476	+13.7%	1,359	1,465	-7.2%	-7.4%
Aprovel®	113	108	+4.6%	26	10	+150.0%	65	69	-8.7%	470	465	-0.2%	674	652	+3.4%	+2.0%
Depakine®	163	163	—	—	—	—	13	14	-7.1%	300	275	+7.6%	476	452	+5.3%	+4.4%
Synvisc® / Synvisc one®	25	25	—	211	217	-7.8%	12	13	—	61	58	+1.7%	309	313	-1.3%	-5.1%
Renagel® / Renvela®	51	60	-15.0%	133	253	-50.2%	32	31	+3.2%	95	67	+38.8%	311	411	-24.3%	-26.5%
Tritace®	141	142	-0.7%	—	—	—	4	5	—	73	74	-1.4%	218	221	-1.4%	-0.9%

Source: Sanofi

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(€ million)	Europe[a]			United States			Rest of the world[b]			Emerging markets[c]			Total Franchise			
	2019	2018	Change at CER	2019	2018	Change at CER	2019	2018	Change at CER	2019	2018	Change at CER	2019	2018	Change on a reported basis	Change at CER
Stilnox®	37	39	-5.1%	42	45	-11.1%	78	86	-14.0%	62	61	+1.6%	219	231	-5.2%	-7.8%
Allegra®	10	8	+25.0%	—	—	—	118	116	-4.3%	—	—	—	128	124	+3.2%	-2.4%
Generics	130	568	-77.1%	152	124	+16.9%	123	113	+1.8%	670	685	—	1,075	1,490	-27.9%	-27.9%
Other established prescription products	1,679	1,768	-4.9%	189	188	-4.3%	386	376	-1.9%	1,202	1,202	+0.7%	3,456	3,534	-2.2%	-2.7%
Total Established Prescription Products	3,197	3,898	-17.9%	786	875	-14.6%	1,105	1,122	-5.5%	4,471	4,438	+0.6%	9,559	10,333	-7.5%	-8.3%
Total General Medicines	4,552	5,299	-14.0%	3,004	3,510	-18.8%	1,520	1,597	-8.4%	6,201	6,010	+3.3%	15,277	16,416	-6.9%	-8.2%
Total China and Emerging Markets	—	—	—	—	—	—	—	—	—	7,437	7,053	+6.4%	—	—	—	—
Total Pharmaceuticals	6,724	7,303	-7.9%	8,937	7,897	+7.4%	2,610	2,432	+3.0%	7,437	7,053	+6.4%	25,708	24,685	+4.1%	+2.2%
Allergy, Cough and Cold	324	347	-6.3%	323	303	+0.7%	160	135	+13.3%	372	339	+8.0%	1,179	1,124	+4.9%	+2.2%
Pain	499	521	-4.0%	185	165	+6.1%	134	119	+7.6%	441	449	+4.0%	1,259	1,254	+0.4%	+1.3%
Digestive	307	314	-1.9%	157	195	-24.1%	51	54	-9.3%	489	423	+13.7%	1,004	986	+1.8%	—
Nutritionals	121	125	-2.4%	38	37	-2.7%	257	256	-1.6%	241	257	-7.8%	657	675	-2.7%	-4.1%
Other	60	96	-39.6%	383	366	-0.5%	36	39	-5.1%	109	120	-7.5%	588	621	-5.3%	-8.2%
Total Consumer Healthcare	1,311	1,403	-6.4%	1,086	1,066	-3.6%	638	603	+2.7%	1,652	1,588	+4.7%	4,687	4,660	+0.6%	-0.8%
Polio / Pertussis / Hib Vaccines	299	296	+1.0%	380	397	-9.6%	159	156	-3.2%	1,108	900	+23.4%	1,946	1,749	+11.3%	+9.8%
Travel and Other Endemics Vaccines	129	117	+10.3%	143	134	+1.5%	61	56	+7.1%	206	181	+12.7%	539	488	+10.5%	+8.4%
Meningitis/ Pneumonia Vaccines	—	—	—	507	466	+3.4%	14	16	-12.5%	161	127	+29.1%	682	609	+12.0%	+8.4%
Adult Booster Vaccines	166	129	+28.7%	320	273	+11.7%	28	26	—	49	42	+16.7%	563	470	+19.8%	+16.2%
Influenza Vaccines	218	177	+23.7%	1,289	1,233	+0.2%	88	81	+4.9%	296	217	+35.0%	1,891	1,708	+10.7%	+7.3%
Other	5	9	-66.7%	94	74	+20.3%	6	7	+71.4%	5	4	-25.0%	110	94	+17.0%	+13.8%
Total Vaccines	817	728	+12.1%	2,733	2,577	+1.1%	356	342	+1.8%	1,825	1,471	+24.0%	5,731	5,118	+12.0%	+9.3%
Total Sanofi	8,852	9,434	-6.1%	12,756	11,540	+5.0%	3,604	3,377	+2.8%	10,914	10,112	+8.7%	36,126	34,463	+4.8%	+2.8%

(a) Europe excluding Eurasia (Russia, Ukraine, Georgia, Belarus, Armenia and Turkey).
(b) Japan, South Korea, Canada, Australia, New Zealand and Puerto Rico.
(c) World excluding United States, Canada, Europe (apart from Eurasia), Japan, South Korea, Australia, New Zealand and Puerto Rico.

Source: Sanofi

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Sanofi R&D Pipeline

New Molecular Entities(*)

Phase 1 (Total : 19)		Phase 2 (Total : 6)		Phase 3 (Total : 7)	Registration (Total : 1)
SAR441344(**)(1) Anti-CD40L mAb Multiple Sclerosis	ST400(**)(5) *Ex Vivo* ZFN Gene-Edited Cell Therapy, Beta thalassemia	SAR440340(**)(10) Anti-IL33 mAb COPD	R SAR439859 SERD Metastatic Breast Cancer 2/3L	SAR442168(**)(13) BTK inhibitor Multiple Sclerosis	sutimlimab Anti Complement C1s mAb Cold Agglutinin Disease
SAR439459 mono & with cemiplimab(**)(10), anti-TGFb mAb Advanced Solid Tumors	BIVV003(**)(5) *Ex Vivo* ZFN Gene-Edited Cell Therapy, Sickle Cell Disease	romilkimab Anti-IL4/IL13 bispecific mAb Systemic Scleroderma	SAR339375 miRNA-21 Alport Syndrome	avalglucosidase alfa Neo GAA Pompe Disease	
O REGN5458(**)(2) Anti-BCMAxCD3 bispecific mAb Relapsed Refractory MM	BIVV020 Complement C1s inhibitor	R olipudase alfa rhASM ASMD(11) ad+ped	Next Gen PCV(**)(12) Pneumococcal Conjugate Vaccines	venglustat Oral GCS inhibitor ADPKD(14)	
O REGN4018(**)(2) Anti-MUC16xCD3 bispecific mAb Ovarian Cancer	SAR443122(**)(6) RIPK1 inhibitor(7) Inflammatory indications			fitusiran RNAi targeting anti-thrombin Hemophilia A and B	
SAR442720(**)(3) SHP2 inhibitor Solid Tumors	SAR441169(**)(8) RORC (ROR gamma T) antagonist, Psoriasis			BIVV001(**)(15) rFVIIIFc – vWF – XTEN(16) Hemophilia A	
SAR440234 T cell engaging multi specific mAb, Leukemia	SAR441236 Tri-specific neutralizing mAb HIV			nirsevimab(**)(17) Respiratory syncytial virus Monoclonal Antibody	
SAR441000(**)(4) mono & with PD1, Cytokine mRNA Solid tumors	Herpes Simplex Virus Type 2(**)(9) HSV-2 therapeutic vaccine			SAR408701 Maytansin-loaded anti-CEACAM5 mAb, NSCLC 2/3L	
SAR442085 Anti CD38 mAb Fc engineered Multiple Myeloma	Respiratory syncytial virus Infants 4-month and older Vaccines				
O REGN5459(**)(2) Anti-BCMAxCD3 bispecific mAb Relapsed Refractory MM	SAR442257 Anti-CD38xCD28xCD3 trispecific mAb, MM / N-H Lymphoma				
SAR444245 (THOR-707) mono & combo, Non-alpha IL-2 Solid tumors					

Immuno-Inflammation · Oncology · Rare Diseases · Rare Blood Disorders · MS & Neuro · Diabetes · Cardiovascular & metabolism · Vaccines

(1) Developed in collaboration with Immunext
(2) Regeneron product for which Sanofi has opt-in rights
(3) Developed in collaboration with Revolution Medicines
(4) Developed in collaboration with BioNTech
(5) Developed in collaboration with Sangamo
(6) Developed in collaboration with Denali
(7) Receptor-interacting serine/threonine-protein kinase 1
(8) Developed in collaboration with Lead Pharma
(9) Developed in collaboration with Immune Design/Merck
(10) Developed in collaboration with Regeneron
(11) Acid Sphingomyelinase Deficiency also known as Niemann Pick type B
(12) Developed in collaboration with SK
(13) Developed in collaboration with Principia
(14) Autosomal Dominant Polycystic Kidney Disease
(15) Developed in collaboration with Sobi
(16) Recombinant Coagulation Factor VIII Fc – von Willebrand Factor – XTEN Fusion protein
(17) Developed in collaboration with AstraZeneca
O : Opt-in rights products for which rights have not been exercised yet
R : Registrational Study (other than Phase 3)
(*) Phase of projects determined by clinicaltrials.gov disclosure timing when relevant
(**) Partnered and/or in collaboration – Sanofi may have limited or shared rights on some of these products
mono = monotherapy; mAb = monoclonal antibody; MM = Multiple Myeloma; GCS = glucosylceramide synthase; N-H Lymphoma = Non-Hodgkin Lymphoma

Source: Sanofi

Additional Indications(*)

Phase 1 (Total : 6)	Phase 2 (Total : 18)		Phase 3 (Total : 22)		Registration (Total : 4)
O cemiplimab(**)(1) +REGN4018(2)(**) Ovarian Cancer	dupilumab(**)(1) Grass pollen allergy	isatuximab + cemiplimab(**)(1) Lymphoma	Dupixent®(**)(1) Asthma 6 - 11 years old	cemiplimab(**)(1) Adjuvant in CSCC	MenQuadfi™ EU 1y+
SAR439859 + palbociclib(3) Metastatic Breast Cancer	R sarilumab(**)(1) Polyarticular JIA(5)	isatuximab + atezolizumab(6) mCRC	dupilumab(**)(1) Eosinophilic Esophagitis	isatuximab Newly Diag. MM Te(9) (GMMG)	Shan 6 Pediatric hexavalent vaccine
sutimlimab ImmuneThrombocytopenic Purpura	R sarilumab(**)(1) Systemic Juvenile Arthritis	isatuximab + atezolizumab(6) Solid Tumors	Dupixent®(**)(1) AD 6 months - 5 years old	isatuximab 2L RRMM (IKEMA)	Dupixent®(**)(1) AD 6 – 11 years old (EU)
SAR442720(**)(4) + cobimetinib Relapsed Refractory solid tumors	SAR440340(**)(1) Asthma	SAR408701 + ramucirumab(7) NSCLC 2/3L	dupilumab(**)(1) COPD	isatuximab 1L Newly Diag. MM Ti(10) (IMROZ)	Aubagio® Relapsing MS – Pediatric
SAR442720(**)(4) + pembrolizumab Solid tumors	dupilumab(**)(1) Peanut Allergy	venglustat Fabry Disease	dupilumab(**)(1) Bullous pemphigoid	isatuximab Smoldering multiple myeloma (ITHACA)	
Yellow Fever Vaccine (Vero cells)	R cemiplimab(**)(1) 2L Basal Cell Carcinoma	venglustat Gaucher Type 3	dupilumab(**)(1) Chronic spontaneous urticaria	Lemtrada® RRMS - Pediatric	
	SAR439859 Breast Cancer adjuvant	venglustat GBA-PD(8)	dupilumab(**)(1) Prurigo nodularis	Cerdelga® Gaucher T1, ERT switch Pediatric	
	isatuximab 1-2L AML / ALL pediatrics	SP0173 Tdap booster US	fitusiran Hemophilia A and B pediatric	venglustat GM2 gangliosidosis	
	isatuximab patients awaiting kidney transplantation	Fluzone® HD Pediatric	cemiplimab(**)(1) 1L NSCLC	Praluent®(**)(1) LDL-C reduction - Pediatric	
			cemiplimab(**)(1) + chemotherapy 1L NSCLC	MenQuadfi™ US / EU 6w+	
			cemiplimab(**)(1) 2L Cervical Cancer	VerorabVax® (VRVg) Purified vero rabies vaccine	

(1) Developed in collaboration with Regeneron
(2) Regeneron product for which Sanofi has opt-in rights
(3) Pfizer product (palbociclib)
(4) Developed in collaboration with Revolution Medicines - cobimetinib is a Genentech product, pembrolizumab.is a Merck product
(5) Polyarticular JIA = Polyarticular Juvenile Idiopathic Arthritis
(6) Studies in collaboration with Genentech Inc. (atezolizumab)
(7) Ramucirumab is an Eli Lilly product
(8) Parkinson's Disease with an associated GBA mutation
(9) Transplant eligible
(10) Transplant ineligible
(*) Phase of projects determined by clinicaltrials.gov disclosure timing when relevant
(**) Partnered and/or in collaboration - Sanofi may have limited or shared rights on some of these products
O : Opt-in rights products for which rights have not been exercised yet
R : Registrational Study (other than Phase 3)
COPD = chronic obstructive pulmonary disease; AML = acute myeloid leukemia; ALL = acute lymphoblastic leukemia; MM = multiple myloma;RRMS = Relapsing / Remitting Multiple Sclerosis

Source: Sanofi

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CEO Paul Hudson's interview in September 2020 for Russell Reynolds Associates:

Q: What leadership competencies are you focusing on, to continue to develop your team for success in the future?
A: Sanofi has not had the traditional evolution; it was created through more than 300 acquisitions over three decades. **While it has grown in scale, it has perhaps not spent enough time on the central maturity in terms of navigating strategy, aligning results deployment, and delivering on purpose.** We started as a leadership team looking at strategy: what we wanted to achieve and what structure would support this strategy. Then we looked at what the critical roles would be and the people needed to lead in that structure. And then, of course, what is the culture that binds all of that? What we found through COVID-19 has been that culture formation is accelerated when you have a single purpose.
As leaders, we have been trying to demonstrate that healthcare is single-minded and purposeful. In large organizations, as they grow and scale, it is normal to drift a little, away from the original purpose and intentions. Now, we have been able to talk about it every day, and it has been a pleasure.

Q: How was the first year as Sanofi CEO?
A: Most of my time, particularly in the first part of my tenure, was about making sure our strategy was clear internally and externally. We needed to reconnect with our commitment to transformational science that could change lives or create miracles. We spent a lot of time on that through the back end of last year, making sure that it was clear to everybody, so that we were moving resources to projects where we saw an unmet need that nobody else was going to try and tackle, and that we thought we could do really well.

With COVID-19, we very quickly felt the desire to jump in, even knowing the risks, to try and pull forward vaccine development. My job in the company at this point is to get all the obstacles out of the way, even to get myself out of the way, because people need to run as fast as they possibly can, unconstrained. We need to cheerlead them in their efforts and work with regulators and government bodies to make sure we can bring vaccines through even faster. It has been a pleasure, because what may have been a meeting room with 15 people became a Zoom call with three or four people who are absolutely essential decision makers, who accept full accountability.

My job going forward will be focused on ensuring we maintain that enthusiasm, that single-mindedness to change, transform and save lives.

What changes due to Covid-19 will you keep?
A: We started very early back in March talking about restart, because we noticed that we started to move faster remotely – meeting sizes got a bit smaller, accountability went up, work flexibility increased, authenticity and trust increased. Together, this meant that people would jump off Zoom and take the actions that they needed; less follow up has been required. At the same time, we stripped the jobs back to their essentials to make sure that we could focus on what is important.
The secret sauce is honesty: making sure that everybody feels they can express themselves and be the best version of themselves. When you are on a Zoom call and somebody's dog jumps on the desk, or a child needs some attention from a parent, it is very leveling. When I have been at home competing for Wi-Fi with my three teenagers, it is humbling to a point where people stop thinking of hierarchy and start thinking about having an impact. I have to say I much prefer that, and I think we will work hard to maintain it.

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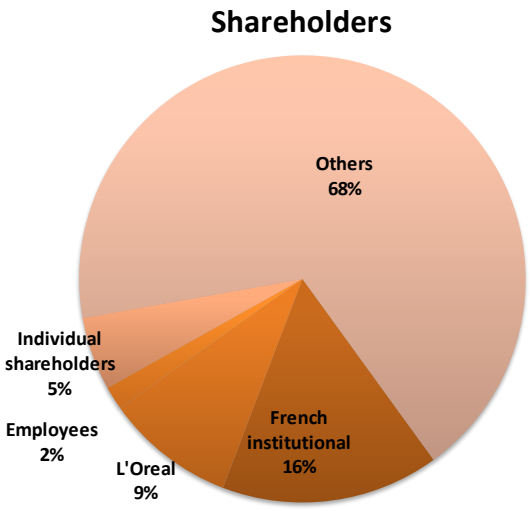
Graph

Source: BiGlobal Trade (partner Saxo Bank); BiG Research

Calendar

October 29th, 2020: 3Q20 earnings
February 5th, 2021: 4Q earnings



Source: Sanofi

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