BRYAN, GARNIER & CO

INDEPENDENT RESEARCH UPDATE

30th May 2016

Sanofi

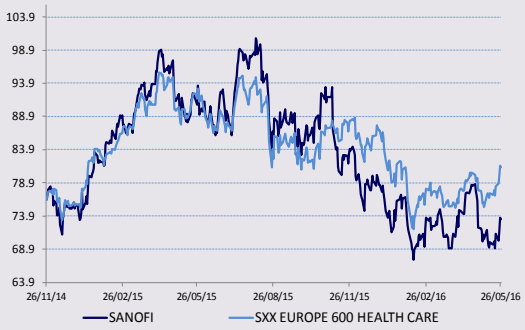
A more focused Sanofi is on the way

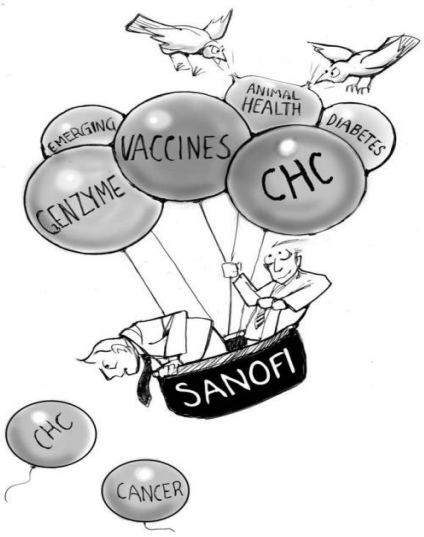
Healthcare

Fair Value EUR83 vs. EUR86 (price EUR73.80) **NEUTRAL**

Bloomberg	SAN FP
Reuters	SASY.PA
12-month High / Low (EUR)	100.7 / 67.3
Market capitalisation (EURm)	94,969
Enterprise Value (BG estimates EURm)	102,368
Avg. 6m daily volume ('000 shares)	3,131
Free Float	91.0%
3y EPS CAGR	2.8%
Gearing (12/15)	13%
Dividend yield (12/16e)	4.07%

YE December	12/15	12/16e	12/17e	12/18e
Revenue (EURm)	36,575	35,963	36,740	38,444
EBIT (EURm)	9,948	9,587	9,591	9,984
Basic EPS (EUR)	5.64	5.40	5.40	5.69
Diluted EPS (EUR)	5.64	5.47	5.52	6.12
EV/Sales	2.80x	2.85x	2.75x	2.57x
EV/EBITDA	9.1x	9.6x	9.7x	9.2x
EV/EBIT	10.3x	10.7x	10.5x	9.9x
P/E	13.1x	13.5x	13.4x	12.1x
ROCE	11.9	11.2	10.9	11.3





Sanofi is currently working on reinforcing its strategic franchises which are set to drive growth into the next decade. The established products will progressively decline whereas the Diabetes/CV GBU will be highly dependent on Praluent. We see the trajectory as positive, believing that it could ultimately open the way to a new and compelling investment case. That said, it is still a tad early in our view.

- Over the next couple of months, Sanofi and B.I. will sign the final agreement by which they will swap their animal health and CHC businesses, Sanofi becoming number one in CHC with over EUR5bn in sales and operating profit leverage for the years to come.

- At Sanofi Pasteur (vaccines), on top of the DengVaxia opportunity, the agreement to dismantle the JV with Merck which is responsible for marketing vaccines in Europe will be a way to boost the influence of this business within the group.

- Genzyme has progressively seen its scope of responsibilities expand from rare diseases to multiple sclerosis and oncology, and is now the cornerstone of the group's Specialty GBU which will include highly promising drugs like dupilumab. This is also a business that Sanofi is looking to leverage through the proposed acquisition of Medivation.

- We see these three pillars becoming the spinal cord of the New Sanofi (their total weight soaring from one third to half the business between 2015 and 2022). The influence of the other activities will wane over time, something which may or may not include the Diabetes/CV GBU, depending mainly on what happens with Praluent.

- As the business moves in this new direction and the focus shifts away from Lantus, we expect Sanofi to again be able to convince investors that the stock is worth buying. How far are we from that point? Maybe no more than a few months and probably by the year-end as the trigger events should take place in 2016. Get ready to jump in!

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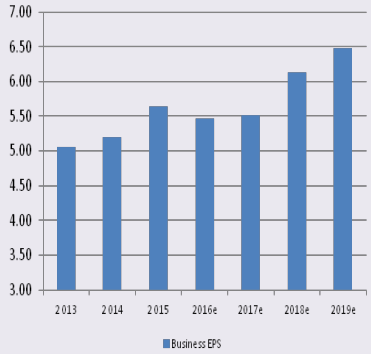

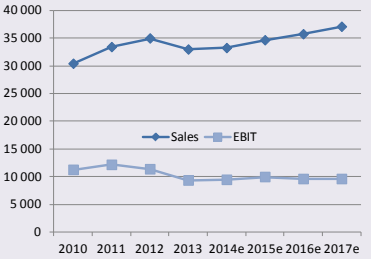

Company description

The current Sanofi was formed in 2004 by the merger of the two French Sanofi-Synthelabo and Aventis. This is the consolidation of various mid-sized companies like Winthrop, Synthelabo, Roussel-Uclaf or more recently Genzyme, including diversified companies like Rhône-Poulenc whose businesses in chemicals and agrochemicals were spun off or sold. Today Sanofi is diversified but in healthcare, having strong businesses in animal health and vaccines but also growing fast in consumer health. The group is currently managing the hardest phase of its patent cliff with its growth platforms that include diversifications as well as emerging markets or diabetes a new phase of refocus that includes exit from animal health and strengthening of Specialty Care.

Income Statement (EURm)	**2013**	**2014**	**2015**	**2016e**	**2017e**	**2018e**	**2019e**
Sales	32,951	33,766	36,575	35,963	36,740	38,444	40,310
Change (%)	*-5.7%*	*2.5%*	*8.3%*	*-1.7%*	*2.2%*	*4.6%*	*4.9%*
EBITDA	10,612	10,655	11,237	10,713	10,441	10,772	10,772
Profits from associates	85.0	147	170	254	370	432	407
Business EBIT	9,324	9,445	9,948	9,587	9,591	9,984	10,983
Change (%)	*-17.9%*	*1.3%*	*5.3%*	*-3.6%*	*0.0%*	*4.1%*	*10.0%*
Financial result	(503)	(447)	(390)	(386)	(296)	(206)	0.0
Pre-tax result	8,898	8,978	9,514	9,027	9,295	9,778	10,877
Exceptionals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax	2,134	2,155	2,187	2,212	2,236	2,341	2,597
Minority interests	162	126	126	20.0	20.0	20.0	20.0
Net result	6,687	6,844	7,371	7,049	7,059	7,437	7,437
Business Net income	6,687	6,843	7,371	6,989	7,059	7,828	8,280
Change (%)	*-18.2%*	*2.3%*	*7.7%*	*-5.2%*	*1.0%*	*10.9%*	*5.8%*
Cash Flow Statement (EURm)							
Cahs flow	7,531	7,483	8,548	8,166	7,959	8,665	9,041
Change in WCR	(124)	988	1,048	54.6	931	919	955
Net Capex	1,398	1,557	3,023	1,850	1,850	1,850	1,500
Net financials investments	(51.0)	2,040	157	0.0	0.0	0.0	0.0
Dividends	3,638	3,676	3,694	3,827	3,919	4,115	4,572
Net debt	6,333	7,473	7,406	7,399	5,970	3,900	1,673
Free Cash flow	6,257	4,938	4,477	5,834	5,347	6,185	6,799
Balance Sheet (EURm)							
Shareholders equity, 100%	57,014	56,268	58,210	58,452	60,812	63,555	66,883
+Provisions	9,619	10,711	10,290	10,290	10,290	10,290	10,290
+Net Debt	6,333	7,473	7,406	7,399	5,970	3,900	1,673
Capital employed	72,990	74,583	77,019	77,255	78,186	78,858	79,959
Intangible assets	67,985	69,801	67,487	67,241	67,411	67,452	67,811
+ WCR	5,712	4,538	2,336	2,818	3,579	4,210	4,952
+ Other / Miscellaneous	(721)	234	1,444	1,444	1,444	1,444	1,444
capital employed	72,990	74,583	77,019	77,255	78,186	78,858	79,959
Total Assets	96,065	97,392	102,321	100,850	103,295	106,181	109,616
Financial Ratios							
Operating margin (%)	28.30	27.97	27.20	26.66	26.10	25.97	27.25
Tax rate (%)	23.98	24.00	22.88	24.50	25.00	25.00	25.00
Net margin	20.29	20.27	20.15	19.44	19.21	20.36	20.54
ROE (after tax) (%)	11.71	12.11	12.91	12.02	11.87	12.63	12.74
ROCE (after tax) (%)	10.29	10.38	11.86	11.15	10.93	11.26	12.19
Gearing	11.11	13.28	12.72	12.66	9.82	6.14	2.50
Payout ratio (%)	54.97	53.97	51.92	55.59	58.29	61.47	66.74
Number of shares, diluted (m)	1,323	1,316	1,306	1,278	1,278	1,278	1,278
Data per Share (EUR)							
Reported EPS	5.00	5.20	5.64	5.40	5.40	5.69	5.69
Adjusted EPS	5.00	5.20	5.64	5.40	5.40	5.69	5.69
Business EPS	5.05	5.20	5.64	5.47	5.52	6.12	6.48
Change (%)	*-18.5%*	*2.9%*	*8.5%*	*-3.1%*	*1.0%*	*10.9%*	*5.8%*
BV/share	42.99	42.65	44.44	45.59	47.42	49.55	52.14
CF/share	5.69	5.69	6.54	6.39	6.23	6.78	7.07
FCF/share	4.73	3.75	3.43	4.56	4.18	4.84	5.32
Net dividend/share	2.80	2.85	2.93	3.00	3.15	3.50	3.80

Source: Company Data; Bryan, Garnier & Co ests.

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1. Three growth drivers

1.1. CHC: building a world-class player

It makes sense to reinforce CHC

In a very similar manner to Novartis and GSK in 2015, Sanofi and Boehringer Ingelheim have entered into exclusive negotiations to swap assets, expanding the former's business in CHC and seeing it exit animal health. In our view, the deal makes a lot of sense from a strategic perspective since these are businesses where size really matters as illustrated by various moves over the last few years in these two buoyant markets. Moreover, since the concept of life science companies vanished and innovation staged a strong come-back in pharmaceuticals, the virtue of having animal health businesses within healthcare groups had become less and less clear. Pfizer's Zoetis was IPOed, Novartis sold its business to Lilly and now Sanofi is divesting its own animal health division. Synergies with the rest of the group's activities are very limited.

More in CHC than in animal healthcare, the players all propound the virtue of size in creating opportunities for economies of scale at various levels (manufacturing, marketing, advertising etc.). Obviously, we've seen that this is easier to execute on the cost as opposed to the revenue side, although having a more extensive range of big brands is clearly an advantage in negotiations with pharmacies.

Big brands from B.I. include Dulcolax (laxative, EUR225m in sales), Buscopan (antispasmodic, EUR223m in sales) and Mucosolvan (cough treatment, EUR168m). In total, this represents a business with sales of EUR1.5bn in 2015, up by 7.1% in CER terms. The enterprise value has been reported to be EUR6.7bn (i.e. about 4x sales considering that China is excluded from the transaction).

Fig. 1: B.I. Consumer Healthcare: main brands

Source: Internet sites

Sanofi has not yet communicated any anticipated synergies from the business combination. By way of comparison, here is what was announced at the time of the previous two big deals:

- In 2015, Bayer and Merck created a combined CHC company worth USD7.4bn, including a c.EUR2.2bn contribution from Merck, a business that Bayer acquired for USD14.2bn. Two caveats: (i) an R&D agreement was signed at the same time influencing the overall price; (ii) the basket of drugs acquired from Merck included non-OTC Claritin sales and more exotic, less profitable businesses like Dr Scholl. This makes comparisons difficult as obviously not all parts of the acquired company can generate synergies. That said, the target is EUR200m in cost synergies and EUR400m in revenue synergies. We see the latter as optimistic whereas the former represents about 10% of the acquired business.

- Turning to the combination between the Novartis and GSK Consumer Healthcare businesses, it is worth mentioning that this was part of a major three-part transaction that needs to be seen as a whole. The price paid thus also has to be considered as part of an overall agreement and may not be truly meaningful although Novartis will have a minority stake in the combined company of 36.5%. As far as synergies go, once the deal had been completed, GSK said that it was expecting to generate GBP400m in cost savings from a total combined business of GBP6.5bn, of which GBP1.5bn had come from Novartis. Note that a portion of the savings came from a turnaround in manufacturing efficiency after a couple of years of disruption and shortages. It is therefore difficult to fully extrapolate this level of synergies for another business combination like Sanofi-B.I.

We believe that Sanofi can generate EUR150m in cost synergies with B.I.

With the limitations and specificities of the transactions described above, we think it is fair to say that the cost synergies to be expected from such a combination are at least equivalent to 10% of the smaller company's sales (the one being integrated by the other). In this case, as B.I. had 2015 revenues of EUR1.5bn in its Consumer Healthcare division, this points to a potential EUR150m.

We have limited information about this business's level of profitability, firstly because B.I. is a private company with no obligation to disclose detailed numbers and, secondly, because CHC is currently only one line within the Sanofi pharmaceuticals division. Although the geography of this business is not ideal (only 26% in the US and 48% in emerging countries), it is already relatively concentrated on strong brands which we assume have good margins like Doliprane in France, Essentiale in Russia, Enterogermina in Italy and Lactacyd in Brazil. In the US, Sanofi has been successful in raising 2010 acquisition Chattem to the next level with historical brands like IcyHot, but also through very successful Rx-to-OTC switches like Allegra OTC (EUR424m in 2015) or Nasacort Allergy 24H (EUR122m in 2015).

Fig. 2: Sanofi Consumer Healthcare: main brands

Product	2015 Reported	2014 Reported	Change on a reported basis	Change at constant exchange rates
Allegra OTC®	424	350	+21.1%	+8.0%
Doliprane®	303	310	-2.3%	-2.3%
Essentiale®	196	235	-16.6%	-6.4%
Enterogermina®	161	156	+3.2%	1.3%
Nasacort Allergy 24H®	122	114	+7.0%	-8.8%
No-Spa®	88	109	-19.3%	-5.5%
Lactacyd®	114	104	+9.6%	+10.6%
Maalox®	97	98	-1.0%	+4.1%
Dorflex®	81	90	-10.0%	+6.7%
Magné B6®	82	88	-6.8%	+9.1%
Other products	1,824	1,683	+8.4%	+4.2%
Total: Consumer Health	**3,492**	**3,337**	**+4.6%**	**+2.8%**

Source: Sanofi Annual Report 2015

Our view

This is part of a long-standing debate on whether to favour pure plays or diversified companies. That said, most players are moving towards a more targeted portfolio of businesses. Novartis has dropped Vaccines and Animal Health, Bayer is exiting Chemicals but also smaller med-tech segments and Sanofi is sensibly now moving in the same direction.

Although the recent past might suggest that the short-term growth momentum is superior in animal healthcare vs consumer healthcare, we are also comfortable with the fact that Sanofi has favoured a portfolio rationale including synergies whilst retaining CHC as opposed to AH.

Taking the recent example of Bayer, it has proven more difficult than anticipated to leverage an acquisition in this space. We would advise caution on the level of inventories in the channels and would assume limited sales synergies to come from geographical expansion of existing brands in that, if they ever materialise, they usually take longer than expected to come through.

CHC might represent 15% of Sanofi in 2020

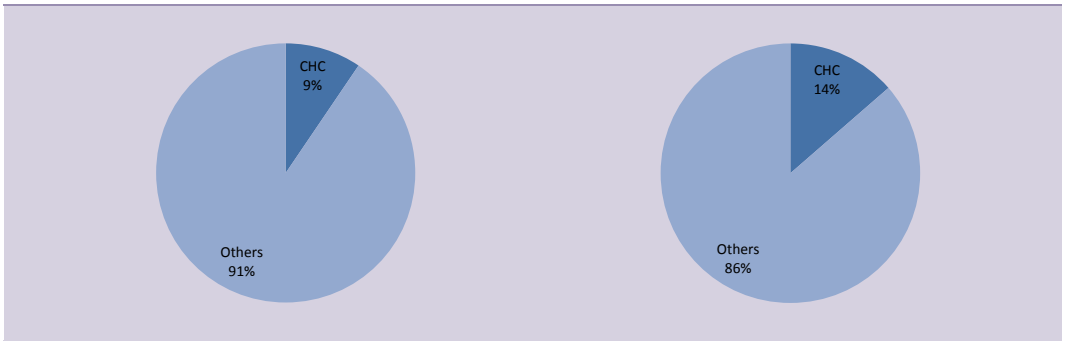
Although we do not know which assets, if any, the antitrust authorities will require Sanofi to divest to approve the combination, a rough estimate suggests that Consumer Healthcare might grow from 9.5% of Sanofi's total 2015 revenues to 13%-13.5% in 2016 and up to 15% in 2020. This will, however, depend on what products like Praluent and dupilumab are capable of delivering.

CHC margins are above the group's level

Once the deal is officially inked, expected mid-2016, we expect Sanofi to make CHC a new global business unit (GBU) like Vaccines which should then provide more details about financials. Considering the product mix with a majority of OTC brands and despite the high proportion of emerging markets, we assume that operating profitability is above the average for the group (it was 25% in 2011 and has grown since then with the launches of Nasacort and Allegra) and, with the expected synergies from the B.I. acquisition, it should remain at a similar level as synergies offset the lower margins from the B.I. business.

Note also that, back in 2014, Sanofi and Lilly announced a licensing agreement for tadalafil OTC (erectile dysfunction treatment currently marketed as Cialis) for Europe, North America and Australia once the patents have expired. The terms of the agreement were not disclosed but are said to include significant royalties and milestone payments whereas the upfront was relatively limited. However, considering the size of the opportunity (over USD2bn in sales for the Rx branded drug), should it be approved, we expect the OTC version of tadalafil to have a positive impact on margins. Although the first patents expire in 2016, we expect the Nov.2017 patent to be the one starting the clock for an OTC version. This is fully incremental to our numbers. Other Rx-to-OTC switches might also be considered.

Fig. 3: CHC within Sanofi pre/post-B.I. transaction (2015 numbers)



Source: Company Data; Bryan, Garnier & Co ests.

1.2. Vaccines: DengVaxia as the primary growth driver

Unlike CHC, where the asset swap with B.I. makes BD/M&A the main growth driver for the GBU, Vaccines will mainly grow organically because:

(i) the underlying market growth is very strong,

(ii) the product mix within the main categories is improving (e.g. increased proportion of new flu vaccines like the intradermal formulation or the high-dose version for elderly patients and new multivalent paediatric vaccines including Pentaxim and Hexaxim, and subsequently with PR5I);

(iii) and, of course, DengVaxia is just taking off in its very first markets in Asia and Latin America.

In any case, there are very few targets for growth by acquisition in this space.

Before we summarize our thoughts on DengVaxia, it is worth also mentioning two points about Sanofi Pasteur as a GBU:

Reclassification of VaxServe revenues

Firstly, Sanofi recently restated its historical numbers by reclassifying all VaxServe sales of non-Group products from 'sales' to 'other revenues' in the P&L, thus removing EUR482m of sales from the division's top-line. Taking this change into consideration, total 2015 sales for Sanofi Pasteur amounted to EUR4,261m or 11.7% of the group's total sales. This is now the base going forward.

Termination of the Sanofi Pasteur MSD joint-venture

Secondly, although financially speaking it is going to be a fairly modest transaction, Sanofi and Merck reached an agreement earlier this year by which they intend to terminate their European joint-venture.

Independence is the preferred route in Europe

For some time now, Sanofi has been unhappy with how operations were developing with the joint-venture. Management changes some two years back led to some improvement, but not enough to prevent independence being the preferred route going forward.

A balanced view about the history of this JV might be that, on one hand, Merck brought some very promising products and strains to the joint-venture, including Gardasil and, more recently, Zostavax. This positive was, however, apparently more than offset by the complexity of steering such a company with shared management. Although the reasons behind the end of the JV are different from the Merial operation (which failed to merge with Intervet), it is clearly never easy to manage joint-ventures over the long term (as also illustrated by AstraZeneca and BMS in diabetes).

That said, how big a deal is it to terminate the JV and operate differently from a financial perspective? While the underlying purpose makes sense from a strategic point of view, the impact will be very limited financially speaking: although it will optically increase the size of Sanofi Pasteur within Sanofi from a revenue perspective, consolidation-wise, SP will move from a shared profit from associates to full consolidation of a smaller entity.

It now remains to be seen which part of the JV will revert to each of the parent companies. In the end, one company may have to make a cash payment to the other to balance the deal and/or to pay royalties on future sales. Although the detailed revenue split is not fully disclosed, we assume that Gardasil, Zostavax and Rotateq (USD327m, 35% of the JV's total sales), which are expected to revert to Merck, are amongst the most profitable, although they are not growth engines (see below).

Fig. 4: Sanofi-Pasteur MSD sales of main products

USDm	2013	2014	2015
Gardasil	291	248	184
Influenza vaccines	162	159	128
Zostavax	68	103	87
Other viral vaccines	104	87	77
Rotateq	55	65	56
Hepatitis vaccines	31	38	62
Other vaccines	453	430	329
Total SP MSD	**1,164**	**1,130**	**923**

Source: Merck 2015 Annual Report

In 2015, total SP-MSD sales were USD923m or EUR824m whereas the share of Sanofi's profits from associates amounted to EUR23m, thus reflecting a 5.6% operating margin. This is not very relevant, however, since there is a substantial amount of inter-company billings. That said, all in all, we assume the profitability of Sanofi Pasteur MSD to be low.

Whatever the details of the transaction, beyond the streamlining of procedures, more effective management and clarification on the strategy, we expect little impact from a financial perspective.

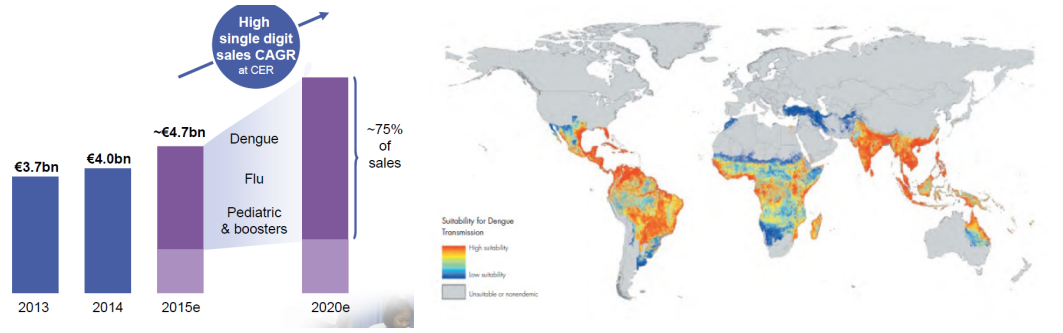
EM is a key growth driver

On the product side, the main short-term growth drivers are likely to be emerging markets for Sanofi Pasteur as (i) Shantha is now back on track; (ii) Hexaxim is a major opportunity for countries in the Southern Hemisphere; (iii) DengVaxia's key markets are in Latin America and South-East Asia. This is going to be enough to drive top-line growth while at least underpinning the current level of profitability although obviously profitability will not be maximised in emerging markets. The operating margin for the division was 33.2% in 2015 and, in our view, DengVaxia can help drive this up into the mid- if not high-thirties by the end of the decade, excluding any potential dilution arising from the integration of the European joint-venture to be dissolved. During the Meet the Management Meeting in early November 2015, one slide showed that the "operating margin [was] expected to improve significantly over 2015-2020" as a result of the product mix and manufacturing efficiencies.

The margin is set to expand further

While there are no sales from SP-MSD in our forecasts, we nonetheless derive an average annual sales growth rate of 8.5% for Sanofi Pasteur between 2015 and 2020. This includes EUR900m for DengVaxia at the end of the period and only EUR100m for the C.diff vaccine, currently in phase III studies, but which is only factored in with a 20% probability of success (PoS) considering the lack of interim data, the competition and unclear positioning in this setting.

Fig. 5: Sanofi Pasteur: projections (left) – burden of dengue (right)



Source: Company Data (left), WHO (2012, right)

Assuming that the above-reproduced chart to the left of Fig.5, coming from Sanofi's slide package at its Meet the Management Day in November 2015, has a working scale behind it, then Sanofi is targeting EUR6.9-7.0bn of sales with Sanofi Pasteur in 2020, a figure which is roughly in line with our estimates (EUR6.4bn) once we adjust for VaxServe sales.

Let's now turn to what is apparently the division's biggest opportunity, DengVaxia, to summarize our thoughts.

Firstly, it should be reiterated that the incidence of dengue is growing very rapidly and it is now estimated that between 50 and 100 million cases now occur annually in more than 100 endemic countries (75% in Asia Pacific and Brazil). Dengue is responsible for more than 20,000 deaths each year according to a WHO report.

Vaccination of 20% of the target population can cut dengue burden by half

In 2012, for the first time, a global strategy was established aiming to halve the burden of dengue by 2020. It is considered realistic that the vaccination of 20% of the country populations in endemic regions can help achieve this objective while reducing the impact of severe outbreaks.

Sanofi's live-attenuated vaccine against dengue is not the only one in development but is by far the most advanced. Filed in 20 countries, it is now approved in four (Mexico, Brazil, Salvador and Philippines) and achieved its first sales in the Philippines in Q1 2016 where a vaccination programme has started. During the Q1 2016 conference call, Sanofi said that it was currently discussing the price of the vaccine with the Brazilian authorities and is expecting a launch within the next few weeks.

In fact, Sanofi Pasteur's potential is likely to be limited by manufacturing capacity. Although the unit prepared its Neuville-sur-Saône site quite some time ago to fully dedicate it to this vaccine, its production is estimated at only 100 million doses per annum by 2017. Hence the highly-targeted approach to the first countries delivered with the vaccine in 2016. That said, it remains to be seen how each country will begin implementing their programmes; for example, in the Philippines, the first agreed programme is targeting only one million public school students which, considering the 3-dose per patient schedule (given 6-months apart), represents 3 million doses in total over 2016 and 2017 of a population of 102 million inhabitants. At this stage, it is difficult to say for sure that this is just the first of many programmes but this is our assumption. Moreover, the Philippines' Health Secretary has estimated that it would cost the government P3.5bn which, considering the forex parity of 52 peso/1 euro equals EUR67 per patient or EUR22 per dose.

Vaccination for this first cohort of students in the Philippines has already begun. The first dose was administered in March, the second dose will be given in September and the last in March 2017. We thus assume that the EUR19m of revenues booked in Q1 2016 for DengVaxia represents delivery of the first dose for the cohort, which is very close to the previous calculation.

In theory, peak sales should exceed EUR1bn

A manufacturing capacity of 100m doses per annum as of next year with a price at c.EUR20 per dose would represent peak sales of EUR2bn rather than the EUR1bn often reported. That said, Sanofi Pasteur is unlikely to sell all the production as it will probably maintain some inventories to contend with any sudden outbreaks or epidemics. Since we see no obvious reason why the average price per dose should differ greatly from the level agreed in the Philippines (except in the case of a price vs. volume type of agreement), EUR1bn now looks like a conservative figure for peak sales in our view, although we are sticking with this figure for the time being.

1.3. GBU Specialty Care: the heart of the engine

Of the three existing GBUs created from the former Pharmaceutical division, a shift is very likely to take place from the previous flagship franchise Diabetes and CV, largely driven by Lantus, to Specialty Care.

When Genzyme was acquired back in 2011, the objective was two-fold: (i) help manage the patent cliff the company was traversing including clopidogrel's loss of exclusivity; (ii) gain exposure to the rare disease market that appeared to be less competitive than others and increase exposure to biologicals.

Genzyme is getting stronger and stronger

This acquisition was transformative for Sanofi and, with today's hind-sight, it is hard to imagine what the group would have become without it. Sanofi rapidly turned around the manufacturing operations that had hitherto handicapped Genzyme's ability to supply Cerezyme and Fabrazyme to the market. Not only did capacity return to normal but Sanofi then invested in Genzyme to recoup full market share in the respective segments. The result is that Sanofi Genzyme is now stronger than ever although, margin-wise, quality control is more expensive than before.

That said, Sanofi realised that Genzyme's approach to rare diseases could be successfully applied to other diseases or therapeutic areas. The first attempt was in multiple sclerosis (MS) where Sanofi had two successive launches with, firstly, Aubagio and then Lemtrada. MS had some common characteristics with rare diseases and it was considered differentiating to allow Genzyme to use its usual recipe within this more competitive market. This has proved very successful since Aubagio in particular has exceeded the most optimistic expectations made by specialists and the company itself. Since Q4 2015, Aubagio's quarterly sales have been running at the pace of a blockbuster with annual sales of over EUR1bn. We expect the drug to exceed EUR1.1bn in sales in 2016.

New responsibilities for Genzyme

With the reorganisation around Global Business Units since 1 January 2016, Sanofi has given new responsibilities for oncology and immunology to the former Genzyme and its top executive David Meeker. In other words, Genzyme will be responsible for the entire Specialty Care area which includes products and therapeutic areas to which Sanofi has decided to allocate significant resources.

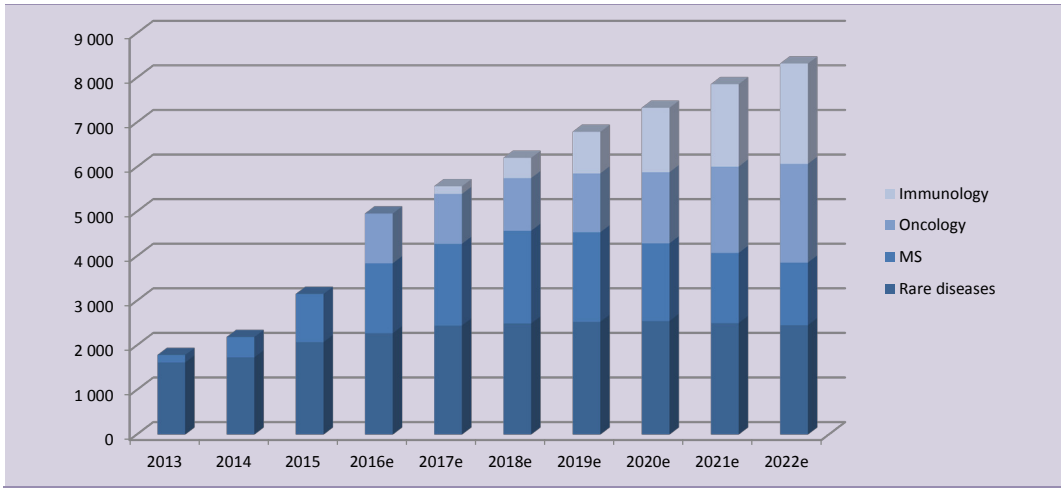
The first is oncology to which Sanofi has decided to significantly increase its commitment, both through internal investment (most of the increase in R&D costs will benefit oncology) and external opportunities as and when they materialize, provided they are not dilutive to earnings and there is a strong rationale for a combination.

While the pipeline is only maturing progressively, several deals have been signed albeit at relatively early stages – that is, until the recent bid for Medivation was announced (see below).

The second is immunology where, it is fair to say, we are not entirely comfortable with or clear about the strategy being pursued by Sanofi in this space: it looks opportunistic and aimed at leveraging the opportunities offered by product assets like sarilumab or dupilumab as far as possible while not necessarily maximizing the synergies between prescriber categories by multiplying the drugs offered to the same targets. These two drugs are unfortunately insufficiently leveraged into franchises. That said, there is little or no doubt that they represent meaningful sales opportunities, even as isolated drugs.

GBU Specialty can almost triple in size from 2015 to 2022 …

Fig. 6: GBU Specialty: sales projections (without Medivation)



Source: Company Data; Bryan, Garnier & Co ests.

… with a significant change in mix

The above Fig.6 shows that the product mix is likely to change significantly in coming years if only because dupilumab is poised to become a very sizeable drug within immunology. There are, however, plenty of questions regarding the GBU including the following which we consider key:

How will Genzyme's historical rare disease franchise move forward since many market segments seem to be already highly penetrated?

Understanding how Sanofi Genzyme will transition its Gaucher, Fabry and Pompe disease franchises to the next generation of drugs (Cerezyme, Fabrazyme and Myozyme together represent 78% of total sales) is certainly a key point. This process may, however, be much more advanced than it currently seems.

Firstly, Cerdelga has already been Sanofi's response in Gaucher so Cerezyme and Cerdelga will henceforth need to be approached together since Cerdelga obviously represents a potential switch for some of Cerezyme's adult patients. In Q1 2016 for instance, Cerezyme declined by 4% to EUR126 but Cerdelga represented about 20% more for the franchise, which was then seeing overall growth and gaining share.

Sanofi now has to bring the other two segments to the same stage and this is ongoing as GZ402666 will quickly move from phase I to phase III in Q2 2016 in Pompe disease whereas the oral GCS inhibitor GZ'402671 in Fabry disease is already progressing in phase II trials. Sanofi is clearly much

more proactive in defending its franchise than Shire. Lastly, from a patent perspective, there are upcoming patent expiries but, given the example of Cerezyme, we wonder whether this is really meaningful in that there are as yet no ready-to-file copycats.

We have thus taken a cautious approach to this franchise meaning if, anything, that Sanofi will be able to beat our expectations since only patisiran has been factored into our estimates with a 30% probability of success. The trial results are expected in early 2018, the earliest we can see a filing emerging from the pipeline of this franchise.

Fig. 7: Sanofi Genzyme's late-stage pipeline in rare diseases

Drug	Indication	Status	Sales in model
Patisiran (Alnylam)	Familial amyloid polyneuropathy (FAP)	Phase III	EUR123m in sales in 2022 (30% PoS)
Revusiran (Alnylam)	Familial amyloid cardiomyopathy (FAC)	Phase III	-
NeoGAA – GZ402666	Pompe disease	From phase I to phase III in Q2 2016	-
Olipudase alpha	Niemann-Pick B disease	Start of phase II/III in Q2 2016	-
GZ 402671	Fabry disease	Phase II ongoing	-

Source: Company Data; Bryan, Garnier & Co ests.

Lastly, we would stress that according to Sanofi in recent slide decks, while it has clear leadership in each of the Gaucher, Fabry and Pompe disease markets, 80% or more of patients with these diseases remain undiagnosed and then untreated which leaves a significant upside potential irrespectively of the success with future developments. Hence a sales CAGR guidance from Sanofi Genzyme to grow rare disease top-line at a high single digit rate by 2020, which compares to our own estimate which is currently more in the mid-single digit area.

How strong is Aubagio's intellectual property and how much does it threaten Sanofi's MS franchise beyond 2017?

While Biogen is the undisputed leader in MS with a broad range of products that address the disease at various stages (Avonex, Plegridy, Tysabri, Tecfidera etc.), just one good product can ensure the success of a new player in this area as illustrated by Novartis with Gilenya.

Sanofi was lucky enough to have two MS candidates in its pipeline a few years ago and so building the infrastructure to maximise this opportunity made a lot of sense. That said, although the two drugs were positioned at opposite ends of the market (one safe but modestly-efficient option and a very potent but rather toxic one), neither appeared at the time to offer a multi-blockbuster opportunity in an increasingly challenging and competitive environment.

This proved to be a false evaluation and understanding of the dynamics and needs of the MS market. The two rising stars, Gilenya and Tecfidera, had been presented as killers of the existing standards of care i.e. interferons and Copaxone. In fact, that is not exactly what happened because, while they did

indeed take market share, the old therapies retained about 50% of the market. Clearly efficacy is not the only driver of the MS market and convenience and safety are also key parameters in the decision tree for physicians and patients when deciding which treatment to prefer.

In this context, the combination of a good job by Genzyme's teams and an ultimately great product corresponding to certain patients' needs resulted in a surprisingly-robust performance from Aubagio which exceeded all expectations. As already mentioned, the drug should easily exceed EUR1.1bn in sales in 2016. Lemtrada is a different story and, although it might be considered a more innovative therapeutic option, it is designed for the top-end of the market and, as a consequence, is reserved for advanced stages, e.g. as an alternative to Tysabri.

Bright prospects in MS despite challenge over Aubagio's patent

All in all, Sanofi's MS franchise could well reach USD2bn in sales next year. The next question relates to what happens going forward since the two drugs have unclear data protection. Teriflunomide, Aubagio's active substance is the active metabolite of leflunomide, formerly marketed as Arava in RA and so there has been a long debate about the rationale for the regulatory authorities recognizing teriflunomide as a NEW active substance. Initially rejected in Europe, the CHMP finally accepted to recognise the drug and it should now be protected in this region until 2023. However, in the US, it is less clear and, referring to the Orange Book, we see data exclusivity expiring in September 2017 whereas three patents are listed as expiring in 2022, 2030 and 2034. Only the first one ('410, method-of-use patent) might provide some protection to Aubagio, in our view. That said, their presence in the Orange Book is sufficient to require generics companies looking to copy the drugs to first establish non-infringement or invalidation. However, as of 3 May 2016, there have been no paragraph IV patent certification submissions as reported on the FDA's website because the earliest they can take place is four years after approval of the drug, i.e. September 2016. Given the 30 days for Sanofi to answer and then a 30-month stay period (which may however be shortened by a summary judgement), we see the risk materializing in early 2019 at the earliest. This is what we have factored into our sales model with progressively declining sales as of 2019.

Lemtrada is another story. Lemtrada is an antibody called alemtuzumab that binds to CD52 antigens and, long after it was first marketed in hematology to treat CLL, it has been established that it may also have applications in MS. Once it had passed all the clinical thresholds, Sanofi decided to withdraw Campath (alemtuzumab in CLL), whose sales were limited, from the market so as to be free to price Lemtrada at a higher level. From a patent perspective, the compound is the same and therefore the method-of-use patent for alemtuzumab expires in 2017 in the US. Sanofi is pursuing additional patent applications but, so far, nothing can be taken for granted meaning that, although it is a biological product, there may be a risk of a copy by the end of the decade in the US. As a consequence, we have maintained flat sales for Lemtrada from 2019 onwards in the US and globally have limited sales to EUR750m at peak. Note also that Sanofi is developing a new-generation anti-CD52 drug for RRMS that is currently in phase I under the name of GZ402668. However, given the usual timeline required to develop a drug in MS, this product cannot reach the market before the next decade.

Oncology has been added as of January 2016 but how exciting is this franchise for the GBU?

Obviously, Oncology used to be a key franchise for Sanofi (when Taxotere and Eloxatine were patent-protected drugs) but no longer is and sales had been declining for years before stabilising at around EUR1bn.

Come-back in oncology requires external growth

That said, it was also made clear by Olivier Brandicourt shortly after he joined Sanofi that Oncology needed to again be deemed a priority for Sanofi and that extra resources would be allocated to reinforce this business, including more Capex and R&D expenses dedicated to oncology but also a specific focus on BD/M&A activities. This initially materialised in relatively early-stage deals, including for an anti PD-1 with Regeneron but has more recently resulted in a USD9.4bn bid for Medivation.

This could be an oncology game-changer for Sanofi since Medivation has both an in-market product and late-stage assets in development. Xtandi (enzalutamide), an androgen-receptor inhibitor approved in castration-resistant metastatic prostate cancer, generates approaching USD2bn of annual worldwide sales, booked by partner Astellas with Medivation receiving about USD700m in collaboration revenues. This far from the end of the story as Xtandi is not only growing fast on the back of strong new data (including TERRAIN which established clear superiority over Casodex) but is also being developed in several other indications for prostate but also breast cancers, with some commentators expecting the drug to exceed USD5bn in sales at peak. In addition to Xtandi, Medivation also has two late-stage assets in clinical development o/w one looks very interesting: the recently-acquired PARP inhibitor talazoparib for breast cancer.

Medivation ticks boxes

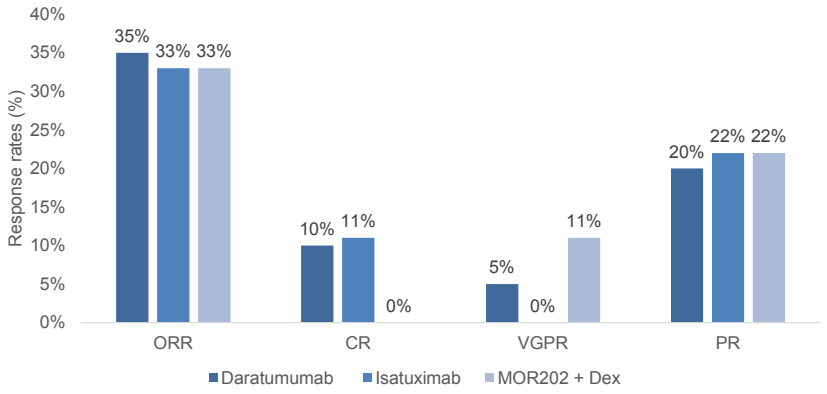
After Sanofi was first rebuffed by Medivation, it decided to go hostile by presenting its offer to the target's shareholders. Sanofi is offering USD52.50 per Medivation share which represents a total consideration of USD9.4bn. Although this is a significant premium over recent levels, it is still well short of the share price highs reached in 2015. Moreover, Xtandi looks like a drug with plenty of remaining growth to capture and talazoparib, if successfully developed and approved, could be managed without a partner. As an already-profitable company, Medivation makes a number of positive arguments for a bidder in the current environment, the least being EPS accretion up to very high price level. We thus expect alternative offers to emerge at higher prices and expect the final acquisition price for Medivation to be USD13bn-14bn. Pfizer and Amgen, which are said to have been invited into the data-room by Medivation, could be challengers to Sanofi and we assume that Novartis will be another. Whether Sanofi will have the final word is very uncertain but whether it is Medivation or another similar target, this move illustrates what Sanofi is prepared to do to strengthen its oncology business within the Specialty Care GBU.

In our forecasts currently, and from the existing pipeline, we only derive future sales from isatuximab, a CD-38 antibody in phase II in multiple myeloma. Our model includes no sales from other products in oncology, not even the anti-PD-1 although it will start the pivotal phase II trial in cutaneous squamous-cell carcinoma in Q2 2016.

Dara is a strong competitor for Sanofi's isatuximab

Just like Genmab's daratumumab, Sanofi's isatuximab is a monoclonal antibody targeting CD38 notably developed as a treatment for myeloma. So far, the two compounds look to have pretty much equal potency based on their respective clinical packages (see Fig. 8)… but we also believe Sanofi will struggle to establish a strong position against "dara".

Fig. 8: CD38 antibodies in MM - Comparison of clinical efficacy profiles (mono)



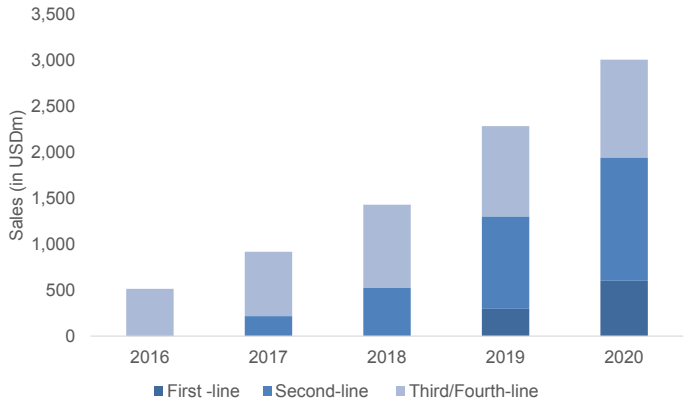
Source: Company data; Bryan, Garnier & Co. ests.

- While dara is known to be a completely human mAb, its counterpart is said to be humanized and thus slightly more immunogenic (meaning a potentially higher risk of allergic reaction).

- For now, the routes of administration are pretty much the same (IV); but nothing is set in stone as we understand that Genmab and JNJ are already developing a subcutaneous form of daratumumab (which could be commercially available by the end of the decade)… and this is far from being insignificant as the latter often 1/ reduces the frequency of some adverse events, and 2/ means that the product can be self-administered.

- As a phase III should be launched by the end of the year, we expect "isa" to reach the market in H2-2019 assuming that 1/ it will be evaluated in combination with Celgene's Revlidmid (lenalidomide) and dexamethasone (which would lengthen the median PFS for both arms); and 2/ as seen with GEN's CASTOR and POLLUX studies, the trial will be stopped early (i.e. two years after its launch) due to a strong benefit.
  By that time, however, we expect "dara" to have become a USD3.0bn blockbuster covering all lines of treatment, both as a monotherapy and in combination with different reference treatments. We may also be "too cautious" as we currently assume that 1/ the top-line results of the ACLYONE study (evaluating the compound in combination with bortezomib in newly-diagnosed patients) will be published in H1-2018, meaning that it won't be stopped early; 2/ first-line won't be addressed before 2019 (see Fig. 9).

Fig. 9: Genmab's daratumumab sales ramp-up (2016-2020e)



Source: Bryan, Garnier & Co. ests.

How big can sarilumab and dupilumab be?

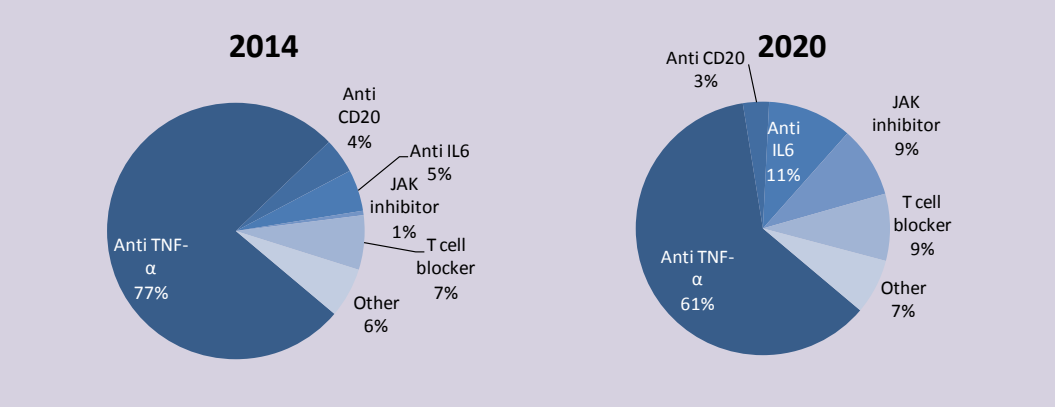
As illustrated on Fig.6, as we approach the turn of the decade, the GBU's growth should mainly be driven by the new Immunology segment, especially if oncology is not further boosted by a structural acquisition and if the MS drugs face loss of data exclusivity in the US.

As of today, this segment is dependent upon the success of two late-stage developments, namely IL-6 antibody sarilumab in RA and IL-4α receptor inhibitor dupilumab in various indications starting with moderate-to-severe atopic dermatitis (AD). They both come from the collaboration between Sanofi and Regeneron and as such will see their economics shared with the US biotechnology company.

With sarilumab in RA, Sanofi's key objective is to help grow the IL-6 segment. RA is effectively a very large and still-rapidly-growing market for drugs, in which the lion's share goes to anti-TNFs although two disruptive new mechanisms of action have emerged of late that should and could take an increasingly large share of the total market as the number of molecules in each category – hence the number of players with extra share of voice – grows.

The RA market is one we know pretty well since we cover both Galapagos and Ablynx which are very dependent on late-stage compounds addressing the disease. Moreover, other European companies under our coverage are exposed to it (Actemra, Roche) or candidates targeting this area (GSK).

Fig. 10: RA market: sales projections (USDm)



Source: Company Data; Bryan, Garnier & Co ests., Evaluate Pharma

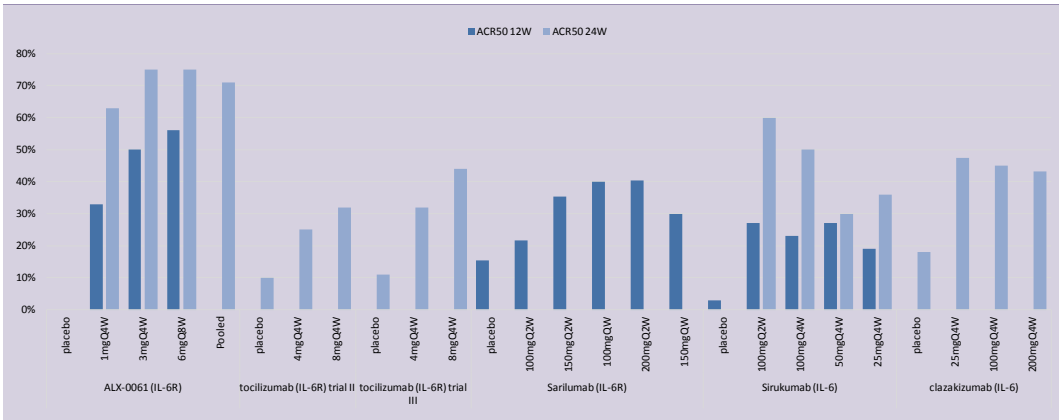
RA is certainly a huge market worth over USD20m and one that is expected to reach circa USD26bn by 2020 (see Fig. 10); the primary objective is thus to participate in this growth. Within the IL-6 and JAK families, first-in-class compounds are already in place. For the JAK family, obviously, Xeljanz is far from a perfect drug and is unlikely to be best-in-class a few years hence as other compounds have shown superior profiles in terms of both efficacy and safety. While the market size is expected to be superior to that of the IL-6s, this is mainly because of the convenience of their oral route of administration.

That said, from a pure efficacy perspective, anti-IL-6s are potent drugs and Actemra has already shown that there is room for this kind of proposition. While, as illustrated on Fig.11, Actemra can be beaten in trials by the new-generation Il-6 inhibitors, its head start over the rest of the pack is

significant and its leadership position could prove difficult to overtake in that superiority will be established by a fairly small margin by other players.

In this context, Sanofi usually agrees that its primary objective is to grow alongside Actemra. However, at the Meet The Management meeting in November 2015, management suggested that TARGET and ASCERTAIN could make sarilumab a product which is differentiated from Actemra while also expecting to find differentiating angles via a different marketing approach like in MS.

Fig. 11: Comparative ACR50 results across the IL-6 class



Source: Company Data; Bryan, Garnier & Co ests.

Sarilumab vs baracitinib: the next battle?

From a timing perspective, as shown below in Fig.12, sarilumab is poised to be next in the US, neck-and-neck with Lilly's baracitinib in the JAK family, the latter looking clearly superior to Xeljanz in its class. Members of these two new classes have demonstrated superiority over anti-TNFs in head-to-head trials. We see baracitinib as a tough competitor in the RA market.

Fig. 12: Competitive landscape in RA

Drugs	Companies	Status	Comments
IL-6 antibodies			
Actemra	Roche	Marketed	CHF1,432m in sales in 2015
Sarilumab	Sanofi/RGN	Filed US	Approval expected in Q4 2016
sirukumab	GSK/Janssen	Ph. III	Filing in 2016
ALX-0061	Ablynx/AbbVie	Ph. IIb	
JAK inhibitors			
Xeljanz	Pfizer	Marketed	USD523m in sales in 2015
Baracitinib	Lilly/Incyte	Filed US	Approval expected in Q4 2016
ABT-494	AbbVie	Ph. III	
Filgotinib	Galapagos/Gilead	Ph. IIb	Should start phase III in Q3 2016

Source: Company Data; Bryan, Garnier & Co ests.

Finally on sarilumab, any forecasting exercise is made more difficult by the long list of upcoming launches in the RA market over the next few years. Rather than building complex models with

multiple assumptions, we prefer to use Actemra's trajectory as a benchmark. We expect sarilumab to track Actemra in its uptake phase and then to grow at a similar pace considering that, with more players in the class, this one should grow faster although this positive impact will be more or less offset by the negative trends coming from the competitive JAK family but also from the first biosimilars of anti-TNF drugs.

We expect sarilumab to reach USD1bn in sales in 2022

Ultimately, on a non-adjusted basis, we expect sarilumab to reach USD1bn in sales in 2022. This corresponds to an 80% tracking of Actemra's sales for each year post-launch, meaning roughly a 35%-65% respective split between sarilumab and Actemra, still on a non-adjusted basis. To date, we had been applying a 60% success rate on sarilumab which is increasingly looking pessimistic based on a well-established proof-of-concept and acceptance of filing in the US such that we now feel comfortable moving this PoS from 60% to 80%. Our current estimates for sarilumab are as follows:

Fig. 13: Sarilumab's projected sales (EURm)

mEUR	2011	2012	2013	2014	2015	2016e	2017e	2018e	2019e	2020e	2021e	2022e
Sarilumab (PoS 80%)							123	321	447	539	645	858
Actemra	502	699	843	1,008	1,340	1,432	1,521	1,597	1,659	1,720	1,783	1,848

Source: Company Data; Bryan, Garnier & Co ests.

Moving to dupilumab, the story is different because the drug looks naturally differentiated from the pack. Moreover, before it even targets the increasingly-crowded severe asthma market, it will address the less competitive, quieter, but-not-necessarily-smaller atopic dermatitis (AD) market. Our understanding is even that Sanofi and Regeneron are enjoying high-quality interaction with the FDA and that the latter may be ready to expedite the review in record time considering the strength of the clinical data and the unmet medical need. The US filing is expected to take place early in Q3 2016 which, based on a highly likely priority review, should translate into approval very early in 2017.

Before we go into more detail about the first targeted indication of dupilumab, i.e. AD, it is worth mentioning that the drug is part of a comprehensive clinical programme encompassing a broad and heterogeneous list of indications, that includes both fairly limited market segments like active eosinophilic esophagitis (EoE) and very sizeable opportunities like in persistent asthma where several phase III trials are already running in about 3,000 patients with 2017 as a central year in terms of clinical data reporting (LIBERTY programme).

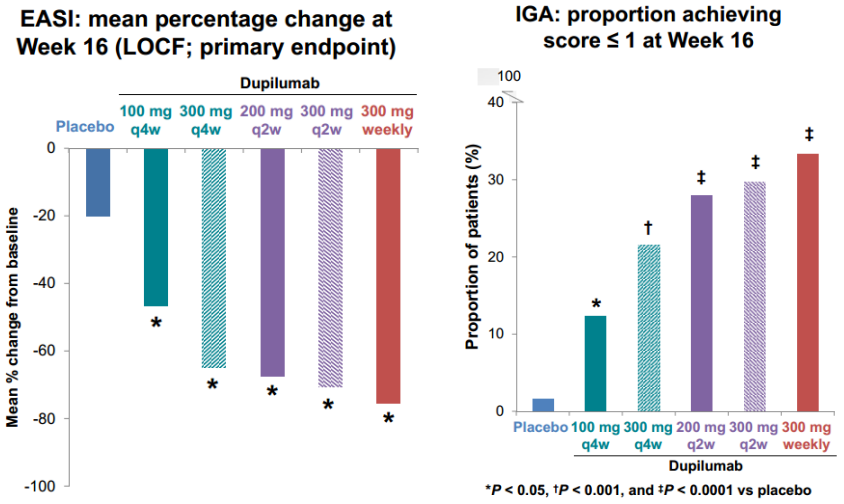
Let us now take a look into the available data for AD noting that, in early April, Sanofi and Regeneron said that the SOLO 1 and SOLO 2 phase III trials had met their primary endpoints:

- 36%-38% of patients receiving dupilumab either at the 300mg dose weekly or every two weeks achieved skin clear or near-clear of lesions (IGA 0-1) compared to 8.5%-10% with placebo at week 16, which is slightly better than the results in phase IIb for all arms so that the placebo-adjusted results are very similar;
- 67%-72% improvement in EASI at week 16 vs 31%-38% with placebo, which is slightly less good than in phase IIb but still highly statistically significant, which is also the case for the percentage of patients achieving EASI75 (44%-52.5% vs 12%-15%).

On a positive note, the two studies delivered very consistent clinical results, which is always reassuring for the regulatory authorities. The detailed clinical results will be presented at an upcoming dermatology conference later this year. In the absence of the phase III results, Fig.14 below shows some of the phase IIb data presented at the 73th Annual Meeting of the AAD in March 2016.

Remember that the inclusion criteria for these studies require patients to have had documented chronic atopic dermatitis for at least 3 years coupled with a history of inadequate or insufficient response to topical AD medications, thereby limiting the use of dupilumab to a small portion of the total population with AD.

Fig. 14: Main phase IIb data presented at the AAD meeting in March 2016



Source: Company Data; American Association of Dermatology (AAD) – March 2016

In line with recent approvals of other specialty dermatology drugs like Xolair in severe urticaria or Cosentyx in severe psoriasis, we expect dupilumab to be another successful biological product to open up a new segment in the rapidly-growing dermatology market previously served by cheap topical drugs. From this perspective, psoriasis is likely to be a fairly good proxy for atopic dermatitis because, despite some initial scepticism, we saw very good uptake of Stelara (J&J) and of the recently-launched Cosentyx (Novartis) although it is still early days.

We assume similar ramp-up between dupilumab and Cosentyx

We would assume a similar ramp-up for the drug although it took some time for biologicals to take positions within the psoriasis market, firstly with anti-TNFs and then with more targeted therapies. More precisely, as the physicians are identical, we anticipate that the experience in psoriasis will have a positive impact on AD ensuring a faster uptake even though Sanofi will be the only pharma company to advocate in favour of a biological in this category.

For modelling purposes, we have assumed that, of the 10% of the adult population with AD, only 3% presents with severe forms of the disease that could require systemic therapy like dupilumab. Of this targeted population, we have deemed c.70% to be potentially be eligible and likely to stay on therapy for reasons of caution (discontinuation rates for AE in phase IIb were limited to less than 2% with the 300mg weekly form and the rate of serious AE in phase III trials was also around 2%). Lastly, the penetration rate is expected to gradually increase to 8%-10% in Europe and the US by early next decade whereas we have assumed an annual price of EUR30,000 in the US and EUR20,000 on average in Europe, which is close to the price set for Cosentyx in the UK for instance whereas pricing in the US needs to factored in cautiously due to discounting and rebating.

EUR2bn peak sales for dupi in AD only

On this basis, we derive revenue numbers that are summarized on Fig.15, i.e. Sanofi will book EUR2bn in peak sales (AD only) in 2025 while paying Regeneron c.50% profit share. We expect the drug to be profitable as of year two (2018). We also assume a cautious PoS of 80% in AD. By the end of the current quarter, Sanofi expects a third phase III trial known as CHRONOS to report results.

Note that we have also factored in sales in nasal polyposis and severe asthma with a PoS of 50% which adds about USD1bn of extra sales at peak once adjusted.

Fig. 15: Sales estimates for dupilumab in AD

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
US pop.	249	251	254	256	259	259	259	259	259	259	259	259	259
EU pop.	240	241	242	242	242	242	242	242	242	242	242	242	242
Eligible US	0.52	0.53	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Eligible EU	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Penetration US			0.5%	1.0%	3.0%	5.0%	6.5%	8.0%	9.0%	10.0%	10.0%	10.0%	10.0%
Penetration EU				0.5%	1.5%	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	8.0%	8.0%
Annual price US			30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000
Annual price EU			20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000
Sales US			80	161	489	815	1,060	1,304	1,467	1,630	1,630	1,630	1,630
Sales EU			0	41	122	244	326	407	488	570	651	651	6
Total sales			**80**	**202**	**611**	**1,059**	**1,385**	**1,711**	**1,955**	**2,200**	**2,281**	**2,281**	**2,281**
in EUR			**71**	**180**	**547**	**947**	**1,239**	**1,530**	**1,749**	**1,968**	**2,040**	**2,040**	**2,040**

Source: Bryan, Garnier & Co ests.

1.4. Conclusion

In conclusion, as we see these three businesses going forward, we are confident of their growing contribution to revenues but, because all three already generate above-group-B.U margins, they should also support margin expansion. In making this statement, we are making some assumptions about the rest of the group, something which requires further remarks:

- Firstly, margin expansion at Sanofi will be highly dependent on what happens with the products coming from the collaboration between Sanofi and Regeneron because, although they are specialty care drugs, the 50/50 profit split will erode profitability quite significantly.

- More specifically, including for our chart reported on Fig.17, the assumption about Praluent is key because it is a major swing factor at group level. Praluent can effectively either be a major contributor, especially if it delivers positive data from the ODYSSEY OUTCOMES study or, on a worst case, no contributor at all depending on the outcome of the patent dispute with Amgen. And there are plenty of other scenarios in-between these two. To date, we have maintained a fairly optimistic view on the PCSK9 class and the drug itself as we assume a scenario in which Praluent achieves USD3.8bn in peak sales in 2023 (albeit reduced from the previous USD5bn forecast).

- Our sales estimates continue to include Sanofi's European Generics business which is currently up for sale and, one way or another, likely to exit the group by the end of our forecasting period.

- Lastly note that, under the new Sanofi GBU scheme, Sanofi Genzyme's sales in emerging markets are part of the Established Markets and EM GBU but this is obviously another fairly visible and growing part of Sanofi's total business representing another EUR893m in sales in 2015, up 12.7%.

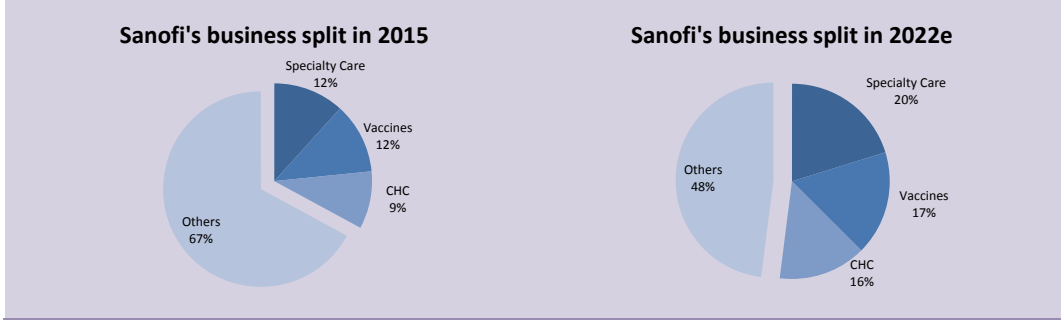
Fig. 16: Three growth drivers going forward

	2015 revenues	2022 est. revenues	CAGR	Comments
Specialty Care	EUR4,275m	EUR8,954m	11.1%	Does not include Medivation
Vaccines	EUR4,261m	EUR7,627m	8.7%	Incl. EUR400m of sales coming from SP MSD
CHC	EUR3,492m	EUR6,450m	9.2%	Incl. B.I. CHC

Source: Company Data; Bryan, Garnier & Co ests.

Without even factoring in EM and Medivation, Specialty Care, Vaccines and CHC will represent more than 50% of Sanofi in 2022e

Fig. 17: Comparison of the three growth drivers between 2015 and 2022



Source: Company Data; Bryan, Garnier & Co ests.

2. Timing is key however

2.1. Sanofi still seen as a Diabetes company

Before Sanofi even created its new organisation around GBUs, Diabetes was at the very forefront of the company since Lantus had overtaken Plavix as Sanofi's largest drug, becoming the growth driver number one by far with, furthermore, a positive influence on profitability. The diabetes franchise enjoyed double-digit growth until 2014 but was also 90% dependent on Lantus.

In 2015 the situation became less positive as succession plans did not go according to plan: (i) Afrezza was approved but then failed to penetrate the market, leaving Sanofi to return the rights to its originator; (ii) Toujeo was also approved although superiority vs Lantus was and still is in doubt and, in the current pricing environment, can only take a small slice of the basal insulin market; (iii) lixisenatide was delayed in the US until the availability of the ELIXA data and has delivered poor results outside the US.

Moreover, the diabetes market, although still dynamic volume-wise, has been facing tougher times for the past few years as payers have increased the required level of rebates and discounts given the increased competition. Sanofi was asked to offer more rebates as Novo-Nordisk became more aggressive and as Levemir became a more legitimate alternative to Lantus. In Europe, the first biosimilar glargine (Basaglar from Lilly) was approved and launched and, although it did not take a big share of the market, it introduced additional pressure on prices. This is also likely to happen in the US when Lilly makes the same drug available i.e. in December 2016.

Sales in diabetes are expected to decline 4-8% per year by 2018

After taking revised assumptions for the market and the franchise into account, Sanofi issued new guidance for its Diabetes business at the end of 2015 pointing to an expected decline in sales at an average annualized rate of between 4% and 8% in 2015-2018. This includes the emerging market business that is still growing strongly but is no longer part of the GBU to which Diabetes belongs. This was, in particular, based on a TRx volume growth assumption for the basal insulin market in the low single digits. It is worth stressing that the latter is currently growing at a slightly higher pace whereas Sanofi's Q1 performance was bang in the middle of the projected range at -6.2%.

For the coming months, we see two main triggers for the franchise: the first is obviously the launch of the biosimilar glargine by Lilly, expected at the very end of 2016, because this will help determine the level of fall-off Lantus will face in the US both as a consequence of volume loss and price cuts. We are modelling a 30% decline for each of the coming years, also considering the internal reallocation of resources towards Toujeo and, in future, maybe IGlarLixi. The second trigger is the expected approvals of lixisenatide mono first in July and then of the lixi/Lantus fixed-dose combination in August. Short-term, this is the main weapon Sanofi Diabetes can use to defend its franchise by switching as many uncontrolled patients as possible from Lantus to lixi/Lantus at a slightly higher – but still reasonable - price.

So, although the original assumptions behind the 2018 guidance look conservative, we think it is fair to wait until IGlarLixi obtains US approval (now likely after a 12-2 vote in favour) and label as this is the single biggest opportunity within the franchise. We therefore expect Sanofi to allocate sizeable resources to the drug to ensure its success, although tough market conditions and recent setbacks will make the group think twice about a proper measure of its RoI.

There have been some interesting examples in the news recently that should help Sanofi decide how to scale the level of investment it puts behind IGlarLixi. The first is Entresto in which Novartis probably under-invested and, consequently, may have prevented (in part) the drug from fully translating the strength of its clinical data into tangible reported sales in the US. Since time is short, Sanofi can't afford to make the same mistake. On the other hand, several product launches in chronic diseases have taken longer than expected to take off and may well end up generating significant losses if the corresponding expenses are not carefully monitored. What seems almost certain is that Sanofi will track the launch very carefully and adjust its investment accordingly.

Whatever happens, Diabetes will see its influence reducing

Whatever the exact curve of the sales decline for the franchise, there is no doubt that Sanofi's Diabetes franchise will see its influence progressively wane over the next few years. We see revenues stabilising at around EUR5bn (excluding EM) towards the end of the decade which may be a tad pessimistic if sotagliflozin (Lexicon) and/or efpeglenatide (Hanmi) are differentiated enough products to be big commercial successes in the market, a scenario that is currently not in our model.

If we now consider Diabetes within the context of the new Diabetes/CV GBU, its future is probably dependent upon Praluent, a subject we address in the next chapter of this note.

2.2. Various swing factors make a short-term call difficult

Having described the change in business mix that we expect to see at Sanofi over the next few years, something which, in our view, will ultimately be positive for the group, its perception and its margin development, one key point is timing. When should we play the turnaround?

Put simply, the answer to the timing question is: not right now, but maybe in the not-too-distant future. The reason why we are not upgrading to a BUY rating on the stock at this stage is because we still see too many binary events, execution risks and difficult-to-play triggers in the short-term. Below we come up with a short list of the salient points:

Praluent is a major swing factor

Praluent is swing factor number one

Although it has seen a significant downwards adjustment, the consensus on Praluent makes this drug one of Sanofi's biggest commercial opportunities. Possibly alongside dupilumab, although the exact scope of indications in which the latter could be successful remains uncertain (competition outside AD will be much fiercer).

There are, however, at least two big unanswered questions about Praluent which make a bet on the drug neither easy, nor comfortable, at this point:

- The first relates to the content of the clinical package. What has been now demonstrated fairly clearly by both alirocumab and evolocumab is that the PCSK9 class is very effective in reducing LDL-c levels in high-risk patients at an all-time low whatever the baseline characteristics and the backbone therapy previously used. That said, as with other biological endpoints like HbA1c or HBP, and considering, amongst other things, that they are injectable drugs in a market segment led by oral drugs and that they are up against very cheap generic references, the key question is: how far is it worth lowering the bar and what is the clinical benefit? And this question is relevant although it has been demonstrated in the past that as long as LDL-c, the lower the better.

We can only answer this question for sure once we have the results from the ongoing cardiovascular outcomes trials, being conducted by the individual sponsors of PCSK9 inhibitors already on the market:

(i) Amgen's FOURIER trial, has enrolled 27,500 patients and compares Repatha to placebo on the back of statin therapy with a primary endpoint of time to a composite endpoint made of cv death, MI, hospitalisation for UA, stroke or coronary revascularisation. Eligible patients had high cholesterol (>70 mg/dL or non HDL-c >100 mg/dL) and clinically evident cv disease. The results are expected during Q4 2016;

(ii) Sanofi and Regeneron's ODYSSEY OUTCOMES trial, has enrolled 18,000 patients and compares Praluent to placebo on the back of intensive statin therapy with a primary endpoint of time to first occurrence of cv death, acute MI, hospitalisation for UA, fatal or non-fatal stroke. Eligible patients had high cholesterol (>70 mg/dL or non HDL-c >100 mg/dL) and were hospitalised for acute MI or UA. Interim analyses are planned when 50% and 75% of the primary events are reached (late in 2016?) and the final data are expected during 2017.

Obviously, should the results of ODYSSEY OUTCOMES be positive and show a statistically significant benefit when adding alirocumab to intensive statin therapy (high-dose of either Lipitor or Crestor) to reduce cardiovascular risk, the target market of Praluent could be very different, which is likely to be true for the PCSK9 class in general. If not, these drugs will remain limited to a reduced portion of the overall cholesterol market composed of very high-risk patients resistant to anything else. There is probably a difference of several billions dollars between the two scenarios for each of the two drugs. In other words, should the afore-mentioned trials be negative then the current sales are likely to be pretty indicative of the type of drugs that Praluent and Repatha will be once available in all markets, i.e. drugs whose peak sales potential is in the hundreds of millions rather than in the billions. Inversely, should they be positive, the products are clearly going to be multi-blockbusters.

Unlike the usual cases when we tend to be cautious, we are relatively confident regarding the achievement of positive data, based on (i) the fact that previous studies have shown that the lower the LDL-c levels the better in terms of cv outcomes and, considering the huge influence of PCSK9 inhibitors on LCL-c, we think it is fair to expect a benefit; (ii) in the pivotal trials presented to date whose endpoints were LDL-c reductions and which were not powered to detect a cv morbi-mortality benefit, mortality was nevertheless assessed as a safety endpoint. Although the numbers were low, there was an imbalance in favour of the active arm. At ACC 2015 for instance, researchers studied a total of 4,465 patients in twelve different phase II and III trials with evolocumab and saw a 53% reduction in cv events (similar to the ones that will be measured in FOURIER). The analysis is not fully rigorous because it mixes different studies of various designs and the absolute number of events (60) is too low to draw conclusions but this does again all point in right direction.

With peak sales reduced from EUR5bn to EUR3.4bn, Praluent represents EUR4.2 per share in our FV

As a consequence, and although we have lowered Praluent's market share from 10% to 8% at peak, we are forecasting EUR3.4bn of sales for the drug in 2023 as shown in Fig.18. This represents EUR4.2 per share in our FV, taking into account the profit-sharing agreement with Regeneron. A worst case scenario (ODYSSEY OUTCOMES negative) would thus impact the FV by about EUR3 per share.

Fig. 18: Sales model for Praluent

	2015	2016	2017	2018	2019	2020	2021	2022	2023
US pop	245	247	249	251	254	256	259	256	259
All presc statins	181	183	184	186	188	189	191	189	191
Severe hypercholesterolemia	9,0	9,1	9,2	9,3	9,4	9,5	9,6	9,5	9,6
Maximum tolerated dose	2,3	2,3	2,3	2,3	2,3	2,4	2,4	2,4	2,4
alirocumab market share	0,0%	1%	2%	4%	6%	8%	8%	8%	8%
Price per year	8760	8760	8760	8760	8760	8760	8760	8760	8760
Sales (USDm)	7,7	179,9	363,2	814,4	1232,5	1657,9	1677,3	1657,9	1677,3
Sales (EURm)	7,0	161,5	325,9	730,8	1106,0	1487,7	1505,2	1487,7	1505,2
EUR pop	239	239	240	241	242	242	242	242	242
All presc statins	119	120	120	120	121	121	121	121	121
Severe hypercholesterolemia	6,0	6,0	6,0	6,0	6,0	6,0	6,1	6,0	6,1
Max tolerated dose or intolerants	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4
alirocumab market share	0%	1%	2%	4%	5%	6%	7%	8%	8%
Price per year	5208	5187	5187	5187	5187	5187	5187	5187	5187
Sales (EURm)	1,9	86,9	199,2	437,1	626,3	751,6	879,6	1002,1	1005,2
ROW pop	315	326,25	341,25	363,75	393,75	435	480	435	480
All presc statins	126	130,5	136,5	145,5	157,5	174	192	174	192
Severe hypercholesterolemia	3,78	3,915	4,095	4,365	4,725	5,22	5,76	5,22	5,76
alirocumab market share	-0,01%	1%	2%	3%	5%	7%	8%	8%	8%
Price per year	2190	2190	2190	2190	2190	2190	2190	2190	2190
Sales (USDm)	-0,66226	42,9	161,4	286,8	517,4	800,2	1009,2	914,5	1009,2
Sales (EURm)	-0,6	38,5	144,9	257,4	464,3	718,1	905,6	820,7	905,6
Probability of success	100%	100%	100%	100%	100%	100%	100%	100%	100%
TOTAL	**8**	**287**	**670**	**1425**	**2197**	**2957**	**3290**	**3311**	**3416**

Source: Bryan, Garnier & Co ests.

- There is another debate regarding Praluent which has nothing to do with clinical data but rather with the intellectual property around the drug and the class.

  In 2014, Amgen sued both Sanofi and Regeneron for patent infringement and, at the time, it did not look too serious. As we moved into 2016 however, specialists close to IP matters started to find this allegation rather less crazy and unfounded from an Amgen perspective and thought it had some chance of success. Put simply, the point is that Amgen filed a very wide patent that makes almost everyone working in the field of PCSK9 a potential patent infringer. The question is whether it is valid or not because, if it is, then alirocumab very probably infringes it. As sometimes happens, however, this type of patent may be considered to encompass too large a portion of the field under investigation and may thus be deemed invalid.

  In March 2016, a US Court Jury upheld two of Amgen's patents and ruled that Sanofi and Regeneron's drug was in infringement. Damages were, however, not awarded. Sanofi and Regeneron then decided to appeal this ruling as they "strongly disagreed with the jury's verdict". A new Court case is now expected to take place, but not until 2017. Since it is going to be a Judge rather than a Jury that will rule this time in the Appeal Court, the outcome may be very different. In the meantime, Amgen also filed for a permanent

injunction and, on 23-24 March 2016, the presiding district court judge, Sue Robinson, heard the parties; her decision is still pending. Since then, we have learned that Sanofi asked for a new trial on 24 May to confirm the District Court decision. There is no timing on this unfortunately but it probably determines the next step.

After the first ruling, it had been expected that Amgen and Sanofi/Regeneron would reach a settlement and agree on a royalty to be paid to Amgen on Praluent's sales. There have, however, been no subsequent developments, something which is hard to interpret (are the different parties simply too confident to settle?). What we do know is that this situation leaves a Damocles sword suspended over Sanofi's head, Amgen probably being the party considering that a settlement is not required (yet).

Being in a launch phase is not comfortable for investors

As we reviewed most of the divisions in the first part of this note, we noted that several drugs were approaching their market launches. The period the company is traversing may thus be seen as an exciting time in which the portfolio is renewed or a challenging one in that it has become increasingly harder to successfully launch drugs in chronic diseases.

A launch phase often means stress about reimbursement, pricing and early adoption

With the exception of dupilumab in atopic dermatitis which should be on a Cosentyx-like trajectory, other products are likely to be something of an enduring headache for the investment community as long as negotiations with payers are ongoing. We expect this situation to prevail with Lyxumia, IGlarLixi and sarilumab, on top of Praluent whose case has already been reviewed. Compared with Entresto, for instance, one might argue that their situation is worse in that Entresto has no competition whereas all the new Sanofi launches will face tough competition. Time will not be on Sanofi's side. In the diabetes field, as outlined above, the clock is ticking and each day counts in the race against Basaglar and Xultophy. In rheumatology, where Sanofi is not a recognised expert currently, the aim is not to overtake Actemra but to establish a strong market share for the IL-6 family versus JAK inhibitors at a time when Lilly is launching an attractive drug, and also to establish a strong number two position before GSK joins the fray.

In the end, it is not that easy to put numbers in spreadsheets as the ramp-up with several products in the new wave is very uncertain.

All ongoing external opportunities have unclear outcomes

We've presented each of the strategic pillars of the New Sanofi as having both internal and external opportunities to leverage but it is also fair to say that the available information on each of them is still limited. This may turn out to be a positive (the context in which we point to share price upside) or negative (until more is forthcoming, the information vacuum is itself a source of additional uncertainties).

As we have argued, the restructuring of the Sanofi Pasteur MSD joint-venture is not a big deal. Unlike the latter, we do, however, see both the asset swap with Boehringer Ingelheim and the proposed acquisition of Medivation as potentially transformative transactions for Sanofi. The difficulty is that the first has so far unveiled only headline information while the second has turned hostile and the target is doing its utmost to identify alternative solutions to Sanofi's proposed acquisition.

Regarding the asset swap with B.I., the deal should be inked midway through the year, so we shouldn't need to wait too long for more details on which to base our forecasts (although by no means everything we need as B.I. is a private company). We know, however, that the swap is earnings dilutive and, for it to be neutral at the core EPS level, Sanofi intends to return most of the EUR4bn received from B.I. in cash to shareholders in the form of share buy-backs.

Turning to Medivation, this transaction is even more uncertain and could take longer. Since Sanofi has filed consent solicitation materials with the SEC, the SEC now has a period in which to make removal and replacement propositions regarding the Board members which usually takes two to three weeks. The period during which Sanofi can receive support for its action then opens and, as soon as there is a first acceptance, a 60-day period opens by the end of which it needs to receive 50% + 1 shareholder backing to be successful in its attempt. This takes us to around mid-August. If, by then, no other party has declared an interest, we would then deem Sanofi's chances of prevailing in its bid to be substantially higher although the new Board will not afford Sanofi any privileges.

Obviously, if we look at the consensus numbers below for the next few years, factoring the 2018 net income without any restatement or synergies into Sanofi's P&L would add an extra 1.2% to the core EPS annual growth rate over the 2015-2018 period.

Fig. 19: Medivation in numbers

USDm	2013	2014	2015	2016e	2017e	2018e	2019e
Sales	203	390	695	933	1,166	1,415	1,637
Op. Inc.	-22	282	415	354	628	733	867
Net Inc.	-43	276	245	171	301	438	539

Source: Medivation 10-Q; Bloomberg estimates.

2.3. Too early to buy but be ready!

In the end, we come to the conclusion that there are still too many unknowns to be comfortable with turning Buyers on Sanofi at this stage.

At the same time, we have identified legitimate reasons for believing in a turnaround that should return the company to a growth trajectory.

Excluding Medivation and without computing either the asset swap with B.I. or the restructuring of the SP-MSD joint-venture, we derive a new FV of EUR83 (vs EUR86, the difference mainly coming from voluntarily more cautious estimates on Praluent). Once visibility improves and uncertainties are removed, in our view Sanofi may well again be an attractive investment vehicle although the timing on this is likely to be a few months hence. For the time being, the core EPS CAGR we derive from the existing Sanofi is too limited (3.5% over [2015-2019]) to make a compelling case.**

** WACC is 6.9%, terminal growth rate is 1.8%

Fig. 20: Key elements of news-flow over the next quarter

Timing	Event
By the end of June	LIBERTY CHRONOS phase III data communicated (dupilumab in AD)
	LixiLan-O and LixiLan-L phase III data presented at the ADA conference
	Final DengVaxia licensure in Brazil and possibly other countries
	Final District Court decision in PCSK9 patent case v. Amgen (?)
July	Final agreement with B.I. to swap assets (Animal Health vs Consumer Care)
	Lyxumia PDUFA date
	First-half results
August	IGlarLixi PDUFA date
	End of the clock for Medivation's Board replacement

Source: Company Data; Bryan, Garnier & Co ests.

APPENDIX

Sanofi – GBU Established products & EM

EURm	2015		2016e		2017e		2018e		2019e		2020e	
Plavix	**1 929**	**-4,1%**	**1 497**		**1 359**		**1 250**		**1 125**		**1 012**	
Europe	184	-22,1%	156	-15,0%	140	-10,0%	126	-10,0%	113	-10,0%	102	-10,0%
United States	1	0,0%	1		0		0		0		0	
Emerging markets	992	9,7%	921	0,0%	881	-5,0%	837	-5,0%	753	-10,0%	678	-10,0%
Other	752	-12,5%	420	-45,0%	338	-20,0%	287	-15,0%	258	-10,0%	232	-10,0%
Lovenox	**1 719**	**-0,5%**	**1 601**		**1 417**		**1 297**		**1 188**		**1 088**	
Europe	1 049	1,5%	997	-5,0%	847	-15,0%	762	-10,0%	686	-10,0%	618	-10,0%
United States	77	-50,8%	69	-10,0%	62	-10,0%	56	-10,0%	50	-10,0%	45	-10,0%
Emerging markets	496	8,9%	451	-2,0%	432	-5,0%	410	-5,0%	389	-5,0%	370	-5,0%
Other	97	3,3%	85	-10,0%	77	-10,0%	69	-10,0%	62	-10,0%	56	-10,0%
Renagel/Renvela	**935**	**18,9%**	**763**		**633**		**523**		**505**		**499**	
Europe	121	-16,1%	109	-10,0%	93	-15,0%	74	-20,0%	74	0,0%	70	-5,0%
United States	723	30,8%	575	-20,0%	459	-20,0%	367	-20,0%	349	-5,0%	349	0,0%
Emerging markets	60	13,7%	51	5,0%	54	5,0%	57	5,0%	57	0,0%	54	-5,0%
Other	31	7,7%	28	-10,0%	27	-5,0%	26	-5,0%	26	0,0%	26	0,0%
Avapro/Aprovel	**762**	**-3,7%**	**659**		**609**		**568**		**511**		**460**	
Europe	148	-25,5%	125	-15,0%	113	-10,0%	101	-10,0%	91	-10,0%	82	-10,0%
United States	15	-33,3%	10		0		0		0		0	
Emerging markets	459	8,9%	405	-5,0%	395	-3,0%	376	-5,0%	338	-10,0%	304	-10,0%
Other	140	-3,8%	119	-15,0%	101	-15,0%	91	-10,0%	82	-10,0%	74	-10,0%
Stilnox/Ambien	**306**		**284**		**255**		**224**		**210**		**197**	
Europe	47	-6,0%	45	-5,0%	42	-5,0%	40	-5,0%	38	-5,0%	36	-5,0%
United States	74	-16,2%	66	-10,0%	59	-10,0%	54	-10,0%	48	-10,0%	43	-10,0%
Emerging markets	54	12,8%	53	5,0%	50	-5,0%	48	-5,0%	45	-5,0%	43	-5,0%
Other	131	-7,4%	120	-12,0%	103	-15,0%	82	-20,0%	78	-5,0%	74	-5,0%
CHC	**3 492**	**2,8%**	**3 381**		**3 566**		**3 761**		**3 967**		**4 185**	
Europe	885	0,6%	907	3,0%	934	3,0%	963	3,0%	991	3,0%	1 021	3,0%
United States	902	6,1%	932	4,0%	968	4,0%	1 017	5,0%	1 067	5,0%	1 121	5,0%
Emerging markets	1 453	0,7%	1 277	1,0%	1 386	7,5%	1 490	7,5%	1 602	7,5%	1 722	7,5%
Other	252	15,8%	265	8,0%	278	5,0%	292	5,0%	306	5,0%	322	5,0%
Generics	**1 917**	**7,6%**	**1 788**		**1 772**		**1 753**		**1 741**		**1 734**	
Europe	823	2,8%	782	-5,0%	743	-5,0%	706	-5,0%	670	-5,0%	637	-5,0%
United States	171	15,4%	170	0,0%	153	-10,0%	138	-10,0%	124	-10,0%	112	-10,0%
Emerging markets	839	6,9%	763	5,0%	810	5,0%	850	5,0%	893	5,0%	938	5,0%
Other	84	86,4%	73	-10,0%	66	-10,0%	59	-10,0%	53	-10,0%	48	-10,0%
EM Sanofi Genzyme	**893**	**12,7%**	**897**	**11,0%**	**995**	**10,0%**	**1 075**	**8,0%**	**1 150**	**7,0%**	**1 231**	**7,0%**
EM Diabetes & CV	**1 413**	**16,5%**	**1 394**	**9,0%**	**1 575**	**12,0%**	**1 716**	**9,0%**	**1 836**	**7,0%**	**1 965**	**7,0%**
TOTAL PHARMACIE	**19 007**	**1,4%**	**17 638**		**17 441**		**17 312**		**17 254**		**17 275**	
Europe	**5 572**	**-2,6%**	**5 323**		**5 024**		**4 795**		**4 603**		**4 425**	
United States	**2 596**	**-1,6%**	**2 518**		**2 390**		**2 308**		**2 299**		**2 315**	
Emerging markets	**8 693**	**7,3%**	**8 079**		**8 485**		**8 785**		**9 001**		**9 250**	
Other	**2 146**	**-6,7%**	**1 718**		**1 543**		**1 423**		**1 350**		**1 285**	

Source: Company Data; Bryan, Garnier & Co ests.

Sanofi – GBU Diabetes/CV

EURm	2015e		2016e		2017e		2018e		2019e		2020e	
Lantus	**5 418**	**-14,9%**	**4 491**		**3 268**		**2 422**		**1 835**		**1 409**	
Europe	991	2,9%	739	-25,0%	592	-20,0%	503	-15,0%	428	-15,0%	363	-15,0%
United States	4 023	-20,5%	3 398	-15,0%	2 375	-30,0%	1 663	-30,0%	1 164	-30,0%	815	-30,0%
Other	404	4,1%	354	-10,0%	301	-15,0%	256	-15,0%	243	-5,0%	231	-5,0%
U300 (Toujeo)	**159**		**480**		**635**		**953**		**1 209**		**1 429**	
Europe	18		79		128		210		271		335	
United States	137		380		465		676		845		972	15,0%
Other	4		20		42		67		94		123	
Amaryl	**83**	**-16,7%**	**71**		**66**		**61**		**55**		**50**	
Europe	26	-13,3%	23	-10,0%	21	-10,0%	19	-10,0%	17	-10,0%	15	-10,0%
United States	2	-50,0%	1		0		0		0		0	
Other	55	-16,1%	47	-12,0%	45	-5,0%	43	-5,0%	38	-10,0%	34	-10,0%
Apidra	**308**	**0,7%**	**301**		**295**		**286**		**289**		**284**	
Europe	124	6,9%	128	4,0%	131	2,0%	131	0,0%	131	0,0%	131	0,0%
United States	145	-7,6%	130	-10,0%	117	-10,0%	105	-10,0%	105	0,0%	100	-5,0%
Other	39	11,8%	43	12,0%	48	12,0%	50	5,0%	53	5,0%	53	0,5%
Lyxumia	**33**	**33,3%**	**96**		**168**		**242**		**321**		**369**	
Europe	24	35,3%	52		76		94		105		101	
United States	0		28		64		108		162		206	
Other	9	28,6%	16		28		40		54		62	
LixiLan			**11**		**240**		**631**		**1 095**		**1 479**	
Europe			0		82		215		313		380	
United States			9		146		358		639		906	
Other			2		11		57		143		193	
TOTAL DIABETES	**6 173**	**-11,3%**	**5 613**		**4 832**		**4 755**		**4 960**		**5 172**	
Europe	**1 337**	**3,8%**	**1 161**		**1 164**		**1 302**		**1 391**		**1 448**	
United States	**4 316**	**-17,3%**	**3 950**		**3 167**		**2 910**		**2 915**		**2 998**	
Other	**520**	**3,4%**	**502**		**501**		**544**		**654**		**726**	
Multaq	**335**	**0,7%**	**300**		**235**		**164**		**111**		**90**	
Europe	44	-6,4%	42		43		45		47		48	
United States	287	2,1%	253		187		113		59		38	
Other	4	0,0%	5		5		5		5		5	
Praluent (PCSK9)	**8**		**286**		**668**		**1 422**		**2 192**		**2 951**	
Europe	1		26		100		284		592		885	
United States	9		258		548		1067		1425		1771	
Other	-1		3		20		71		175		295	
TOTAL CV	**343**	**3,5%**	**586**		**904**		**1 586**		**2 303**		**3 042**	
Europe	**45**		**68**		**144**		**330**		**638**		**933**	
United States	**296**	**5,1%**	**510**		**735**		**1 180**		**1 484**		**1 808**	
Other	**3**		**8**		**25**		**76**		**180**		**300**	
TOTAL DIABETES & CV	**6 517**	**-10,6%**	**6 199**		**5 735**		**6 341**		**7 263**		**8 214**	
Europe	**1 382**	**3,6%**	**1 229**		**1 308**		**1 632**		**2 029**		**2 381**	
United States	**4 612**	**-16,1%**	**4 460**		**3 902**		**4 090**		**4 399**		**4 807**	
Other	**523**	**3,4%**	**509**		**526**		**620**		**835**		**1 026**	

Source: Company Data; Bryan, Garnier & Co ests.

Sanofi – GBU Specialty Care (1/2)

EURm	2015	var	2016	var	2017	var	2018	var	2019	var	2020	var
Cerezyme	**532**	**-3,5%**	**502**		**468**		**415**		**357**		**307**	
Europe	283	0,4%	275	-3,0%	261	-5,0%	235	-10,0%	200	-15,0%	170	-15,0%
United States	201	-9,1%	182	-9,0%	163	-10,0%	139	-15,0%	118	-15,0%	100	-15,0%
Rest of the world	48	-4,3%	46	-5,0%	43	-5,0%	41	-5,0%	39	-5,0%	37	-5,0%
Myozyme/Lumizyme	**556**	**10,7%**	**585**		**614**		**625**		**630**		**634**	
Europe	307	4,8%	322	5,0%	338	5,0%	338	0,0%	338	0,0%	338	0,0%
United States	205	20,4%	214	5,0%	224	5,0%	235	5,0%	240	2,0%	245	2,0%
Rest of the world	44	19,4%	49	10,0%	51	5,0%	51	0,0%	51	0,0%	51	0,0%
Fabrazyme	**529**	**15,9%**	**580**		**608**		**630**		**654**		**679**	
Europe	140	17,9%	153	9,0%	160	5,0%	160	0,0%	160	0,0%	160	0,0%
United States	305	14,3%	333	10,0%	350	5,0%	367	5,0%	385	5,0%	405	5,0%
Rest of the world	84	17,6%	94	11,0%	98	5,0%	103	5,0%	108	5,0%	114	5,0%
Cerdelga	**66**		**215**		**365**		**430**		**497**		**537**	
Europe	6		81		161		188		226		242	
United States	60		107		161		188		201		215	
Rest of the world	0		27		43		54		70		81	
Aldurazyme	**137**	**3,2%**	**140**		**143**		**144**		**143**		**142**	
Europe	75	4,2%	79	5,0%	83	5,0%	85	3,0%	85	0,0%	85	0,0%
United States	40	0,0%	39	0,0%	39	0,0%	39	0,0%	39	0,0%	39	0,0%
Rest of the world	22	5,0%	22	0,0%	21	-5,0%	20	-5,0%	19	-5,0%	18	-5,0%
patisiran (Alnylam)					**51**		**78**		**94**		**110**	
Europe					13		21		27		32	
United States					27		40		47		54	
Rest of the world					11		16		20		24	
Total rare diseases	**2 075**	**9,7%**	**2 281**		**2 508**		**2 581**		**2 634**		**2 669**	
Europe	**863**	**6,4%**	**961**		**1069**		**1080**		**1088**		**1079**	
United States	**925**	**14,5%**	**989**		**1078**		**1122**		**1144**		**1171**	
Rest of the world	**287**	**7,5%**	**331**		**361**		**379**		**401**		**419**	
Aubagio	**847**	**76,4%**	**1137**		**1292**		**1431**		**1270**		**1002**	
Europe	197	133,3%	313		367		402		447		402	
United States	618	59,2%	761		849		939		715		492	
Rest of the world	32		63		76		90		107		107	
Lemtrada	**233**		**439**		**553**		**663**		**752**		**752**	
Europe	91		161		251		313		313		313	
United States	128		206		233		269		358		358	
Rest of the world	14		72		70		81		81		81	
Total Multiple Sclerosis	**1 080**	**109,9%**	**1 576**		**1 845**		**2 093**		**2 022**		**1 754**	
Europe	**288**		**475**		**617**		**716**		**760**		**716**	
United States	**746**	**91,2%**	**967**		**1082**		**1207**		**1073**		**850**	
Rest of the world	**46**		**134**		**146**		**170**		**188**		**188**	

Sanofi – GBU Specialty Care (2/2)

EURm	2015	var	2016	var	2017	var	2018	var	2019	var	2020	var
Taxotère	**80**	**-38,2%**	**70**		**62**		**58**		**55**		**52**	
Europe	7	-62,5%	6	-15,0%	5	-15,0%	4	-15,0%	4	-15,0%	3	-10,0%
United States	-1		1		0		0		0		0	
Rest of the world	74	-28,3%	63	-15,0%	57	-10,0%	54	-5,0%	51	-5,0%	49	-5,0%
Jevtana/Cabazitaxel	**294**	**10,6%**	**324**		**341**		**344**		**337**		**330**	
Europe	141	-4,8%	133	-6,0%	122	-8,0%	115	-6,0%	107	-7,0%	97	-9,0%
United States	127	16,5%	139	10,0%	146	5,0%	146	0,0%	138	-5,0%	131	-5,0%
Rest of the world	26	225,0%	52	100,0%	73	40,0%	84	15,0%	92	10,0%	102	10,0%
Eloxatine	**97**	**-15,0%**	**69**		**60**		**57**		**54**		**51**	
Europe	4	-20,0%	1		0		0		0		0	
United States	9	-68,2%	5		0		0		0		0	
Rest of the world	84	0,0%	63	-25,0%	60	-5,0%	57	-5,0%	54	-5,0%	51	-5,0%
Thymoglobulin	**205**	**9,8%**	**220**		**230**		**239**		**249**		**252**	
Europe	40	8,3%	43	7,0%	45	5,0%	47	4,0%	48	2,0%	48	0,0%
United States	145	12,0%	157	9,0%	166	6,0%	175	5,0%	183	5,0%	187	2,0%
Rest of the world	20	0,0%	20	-2,0%	19	-5,0%	18	-5,0%	18	0,0%	18	0,0%
isatuximab (CD38)	**0**		**0**		**0**		**0**		**109**		**512**	
Europe									22		154	
United States							0		87		281	
Rest of the world											77	
Total Oncology	**1 120**	**-2,5%**	**1 120**		**1 123**		**1 121**		**1 218**		**1 601**	
Europe	**340**	**-1,2%**	**335**		**328**		**322**		**336**		**456**	
United States	**546**	**-3,2%**	**556**		**555**		**553**		**633**		**814**	
Other	**234**	**-3,0%**	**229**		**240**		**245**		**249**		**331**	
sarilumab					**123**		**321**		**447**		**539**	
Europe					12		64		112		135	
United States					105		225		268		324	
Rest of the world					6		32		67		81	
dupilumab					**57**		**290**		**710**		**1180**	
Europe					6		73		213		354	
United States					51		189		391		649	
Rest of the world							29		107		177	
Total B.U. Sanofi Genzyme			**4 976**		**5 657**		**6 406**		**7 031**		**7 742**	
Europe	**1 491**	**17,6%**	**1 770**		**2 033**		**2 255**		**2 510**		**2 740**	
United States	**2 217**	**25,9%**	**2 512**		**2 871**		**3 296**		**3 510**		**3 808**	
Other	**567**	**8,2%**	**694**		**753**		**855**		**1 012**		**1 195**	

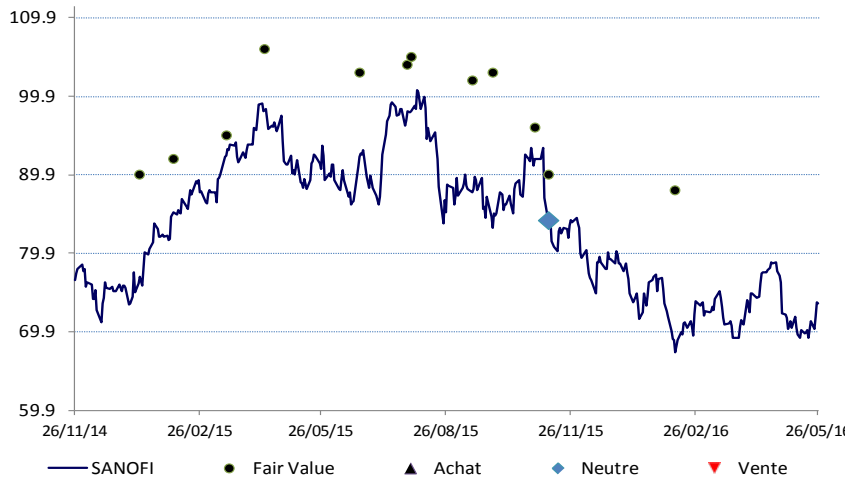
Source: Company Data; Bryan, Garnier & Co ests.

EURm	2015	var	2016	Var	2017	Var	2018	Var	2019	Var	2020	var
Vaccines	**4 261**	**7%**	**4 640**		**5 341**		**5 797**		**6 123**		**6 459**	
United States	**2 340**	**7%**	**2 428**		**2 729**		**2 889**		**3 005**		**3 122**	
Western Europe	**284**	**-1%**	**288**		**293**		**294**		**295**		**296**	
Emerging	**1 379**	**12%**	**1 663**		**2 047**		**2 330**		**2 527**		**2 732**	
Other	**258**	**-8%**	**261**		**272**		**284**		**296**		**309**	
Pediatrics	1 348	8%	1 380		1 530		1 699		1 835		1 984	
United States	393	-20%	312	-20%	328	5%	344	5%	362	5%	380	5%
Western Europe	90	50%	90	0%	90	0%	90	0%	90	0%	90	0%
Emerging	736	33%	846	15%	973	15%	1119	15%	1231	10%	1354	10%
Other	129	-16%	131	5%	138	5%	145	5%	152	5%	160	5%
Adult boosters	496	10%	519		547		578		611		642	
United States	360	10%	376	5%	394	5%	414	5%	435	5%	457	5%
Western Europe	62	-14%	62	0%	62	0%	62	0%	62	0%	62	0%
Emerging	54	35%	62	15%	71	15%	82	15%	94	15%	104	10%
Other	20	27%	19	0%	19	0%	19	0%	19	0%	19	0%
Flu	1 322	2%	1 398		1 480		1 569		1 655		1 742	
United States	896	12%	935	5%	982	5%	1031	5%	1082	5%	1136	5%
Western Europe	96	-4%	97	1%	98	1%	99	1%	100	1%	101	1%
Emerging	294	-15%	329	12%	362	10%	398	10%	430	8%	460	7%
Other	36	-3%	37	5%	39	5%	40	5%	42	5%	45	5%
Travelers	375	-7%	375		387		399		412		426	
United States	111	-2%	110	0%	110	0%	110	0%	110	0%	110	0%
Western Europe	30	5%	30	0%	30	0%	30	0%	30	0%	30	0%
Emerging	181	-11%	181	0%	190	5%	200	5%	210	5%	220	5%
Other	53	-4%	54	5%	57	5%	60	5%	63	5%	66	5%
Meningitis	614	17%	629		638		624		601		576	
United States	496	15%	503	2%	503	0%	483	-4%	454	-6%	422	-7%
Western Europe	3		6		10		10		10		10	
Emerging	106	29%	111	5%	117	5%	123	5%	129	5%	135	5%
Other	9	-11%	9	0%	9		9		9		9	
Other	106	20%	88		88		88		88		88	
United States	84	21%	67	-20%	67	0%	67	0%	67	0%	67	0%
Western Europe	3		3	0%	3	0%	3	0%	3	0%	3	0%
Emerging	8		8	0%	8	0%	8	0%	8	0%	8	0%
Other	11		11	0%	11	0%	11	0%	11	0%	11	0%
DengVaxia	0		250		650		800		850		900	
C. Diff.					20		40		70		100	

Source: Company Data; Bryan, Garnier & Co ests.

Price Chart and Rating History

Sanofi



Ratings		
Date	**Ratings**	**Price**
09/11/15	NEUTRAL	EUR86.9
18/07/11	BUY	EUR54.7

Target Price	
Date	**Target price**
02/05/16	EUR86
01/04/16	EUR87
10/02/16	EUR88
09/11/15	EUR90
30/10/15	EUR96
29/09/15	EUR103
14/09/15	EUR102
31/07/15	EUR105
28/07/15	EUR104
23/06/15	EUR103
14/04/15	EUR106
17/03/15	EUR95
06/02/15	EUR92
12/01/15	EUR90
29/10/14	EUR87
28/10/14	Under review

Bryan Garnier stock rating system

For the purposes of this Report, the Bryan Garnier stock rating system is defined as follows:

Stock rating

BUY — Positive opinion for a stock where we expect a favourable performance in absolute terms over a period of 6 months from the publication of a recommendation. This opinion is based not only on the FV (the potential upside based on valuation), but also takes into account a number of elements that could include a SWOT analysis, momentum, technical aspects or the sector backdrop. Every subsequent published update on the stock will feature an introduction outlining the key reasons behind the opinion.

NEUTRAL — Opinion recommending not to trade in a stock short-term, neither as a BUYER or a SELLER, due to a specific set of factors. This view is intended to be temporary. It may reflect different situations, but in particular those where a fair value shows no significant potential or where an upcoming binary event constitutes a high-risk that is difficult to quantify. Every subsequent published update on the stock will feature an introduction outlining the key reasons behind the opinion.

SELL — Negative opinion for a stock where we expect an unfavourable performance in absolute terms over a period of 6 months from the publication of a recommendation. This opinion is based not only on the FV (the potential downside based on valuation), but also takes into account a number of elements that could include a SWOT analysis, momentum, technical aspects or the sector backdrop. Every subsequent published update on the stock will feature an introduction outlining the key reasons behind the opinion.

Distribution of stock ratings

BUY ratings 55.9% NEUTRAL ratings 34.3% SELL ratings 9.8%

Research Disclosure Legend

1	Bryan Garnier shareholding in Issuer	Bryan Garnier & Co Limited or another company in its group (together, the "Bryan Garnier Group") has a shareholding that, individually or combined, exceeds 5% of the paid up and issued share capital of a company that is the subject of this Report (the "Issuer").	No
2	Issuer shareholding in Bryan Garnier	The Issuer has a shareholding that exceeds 5% of the paid up and issued share capital of one or more members of the Bryan Garnier Group.	No
3	Financial interest	A member of the Bryan Garnier Group holds one or more financial interests in relation to the Issuer which are significant in relation to this report	No
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5	Lead/co-lead manager	In the past twelve months, a member of the Bryan Garnier Group has been lead manager or co-lead manager of one or more publicly disclosed offers of securities of the Issuer or in any related derivatives.	No
6	Investment banking agreement	A member of the Bryan Garnier Group is or has in the past twelve months been party to an agreement with the Issuer relating to the provision of investment banking services, or has in that period received payment or been promised payment in respect of such services.	No
7	Research agreement	A member of the Bryan Garnier Group is party to an agreement with the Issuer relating to the production of this Report.	No
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11	Analyst has short position	The investment analyst or another person involved in the preparation of this Report has a short position in the securities or derivatives of the Issuer.	No
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15	Other disclosures	Other specific disclosures: Report sent to Issuer to verify factual accuracy (with the recommendation/rating, price target/spread and summary of conclusions removed).	No

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Please see the section headed "Important information" on the back page of this report.

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