UCB

Confidence Leap Launches Can Replace Legacy Products; Upgrade to Buy

9 January 2020

Key Takeaway

A pipeline deep dive gives confidence that a wave of upcoming new launches, including potential blockbusters Evenity, bimekizumab and zilucoplan, can offset slow-to-declining legacy drugs from 2021E, driving sustainable growth, which many doubted was viable. Our EPS are 8%-14% above cons 2020-22E despite higher R&D forecasts. UCB trades at a c.10% discount to peers, unwarranted given robust growth and pipeline optionality. Upgrade to Buy with €95 PT.

Concerns regarding near-term sustainability misplaced: Our pipeline deep dive gives greater confidence that an upcoming wave of potential blockbuster product launches should help sustain growth, even as key products slow/decline in the face of increasing competition and patent expiries. We see blockbuster potential for: (1) **Evenity** in osteoporosis, currently launching in Europe after a surprise but welcome approval despite earlier rejection; (2) **bimekizumab** approvals in psoriasis from 2021E, albeit against fierce competition, with greater potential in psoriatic arthritis and ankylosing spondylitis with Phase III data by YE21E; (3) **zilucoplan** in generalised myasthenia gravis (gMG) with Phase III data 1H21E, arguably de-risked in our view, for launches from 2022E.

Pipeline optionality provides upside potential: Our forecasts include risk-adjusted contributions for rozanolixizumab (anti-FcRn) for IgG-mediated autoimmune disorders, with only 30% probability in the key CIDP indication, plus conservative assumptions for padsevonil in drug-resistant epilepsy, with Phase IIb data 1H20E and Phase III 2H21E. We do not include daprolizumab in lupus, due to start Phase III with partner Biogen 1H20E despite prior mixed Phase IIb, or earlier stage assets including α-synuclein inhibitor UCB0599 and anti-tau Ab UCB0107.

Multiple upside levers: Our earnings are already 8%-14% ahead of consensus, but there could be further upside. This includes potential Cimzia upgrades, as it faces competition from Humira biosimilars, available in Europe since 4Q18 albeit not in the US until end-2022E. Our Cimzia forecasts are just below consensus, declining from €1.6bn peak in 2021E, with management targeting €1.7bn in 2024E, aiming to capitalise on recent launches, including psoriasis, plus its relatively niche position and differentiating factors, such as safety in women of child-bearing age. We are ahead of consensus on future spend, notably R&D, largely reflecting the $2.5bn Ra Pharma acquisition for which we see a strong strategic rationale, expected to close 1Q20E diluting 2020-21E EPS.

PT to €95 on increased pipeline confidence: Our forecasts and valuation now include $1.45bn peak sales for zilucoplan, with $1.3bn in gMG alone, driving €14/share NPV (15%). We have hiked Evenity forecasts in the US and Japan given encouraging launch metrics and now include sales in Europe, booked by UCB, following the recent approval. Evenity $1.5bn WW peak sales, from $800m, contributes €11/share NPV (11%). On bimekizumab we have increased peak sales to $1.5bn (from $1bn) and probability to 90% (from 50%) after recent positive Phase III psoriasis data for €12/share NPV (13%). Combined these three drug upgrades hike NPVs €27/share (29%).

Rating | Target | Estimate Change

Belgium | Biotechnology

RATING	BUY (FROM HOLD)
PRICE	€73.34^
MARKET CAP	€14.3B / $15.9B
PRICE TARGET (PT)	€95.00 (FROM €70.00)
UPSIDE SCENARIO PT	€110.00
DOWNSIDE SCENARIO PT	€55.00

^Prior trading day's closing price unless otherwise noted.

FY Dec EUR	2018A	2019E	2020E	2021E
EPS	4.78	4.69	5.16	5.81
Prev.		*4.63*	*5.24*	*5.99*
FY P/E	15.3x	15.6x	14.2x	12.6x

As defined by UCB Core EPS

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Estimates				
€	2018A	2019E	2020E	2021E
Rev. (MM)	4,632.0	4,736.9	5,222.6	5,593.4
Previous		4,710.4	5,073.5	5,358.0
EBIT (MM)	1,275.0	1,238.1	1,336.0	1,492.1
Previous		1,222.7	1,335.5	1,494.2
EPS-GAAP	4.24	4.09	4.38	5.03
Previous		4.03	4.46	5.21
EPS	4.78	4.69	5.16	5.81
Previous		4.63	5.24	5.99

Valuation				
	2018A	2019E	2020E	2021E
P/Rev	3.1x	3.0x	2.7x	2.6x
FY P/E GAAP	17.3x	17.9x	16.7x	14.6x
EV/Rev	3.2x	3.1x	2.8x	2.6x
EV/EBIT	11.5x	11.8x	11.0x	9.8x
FY P/E	15.3x	15.6x	14.2x	12.6x

As defined by UCB Recurring EBIT
As defined by UCB Core EPS

Market Data	
52-Week Range:	€80.06 - €62.26
Total Entprs. Value	€14.7B
Avg. Daily Value MM (USD)	28.74
Insider Ownership	38.2%
Float (%)	61.9%

Financial Summary	
Long-Term Debt (MM)	€1,002.0
Dividend Yield	1.2%
Cash & ST Invest. (MM)	€1,001.0

The Long View

Scenarios

Base Case

- We believe pipeline launches, including potential blockbusters Evenity, bimekizumab and zilucoplan, should offset slow-to-declining sales of key products including Cimzia, Vimpat, Neupro and Briviact.
- We remain conservative on padsevonil in epilepsy and include no NPV contribution for anti-tau, anti-alpha synuclein and dapirolizumab entering Phase III despite equivocal Phase II.
- Shares are trading below EU Mid-Cap BioPharma peers on c.14x 2021E, despite robust growth and pipeline optionality. Our €95 per share Price Target, based on NPVs, implies c.16x PE.

Upside Scenario

- Minimal impact on Cimzia sales growth from future anti-TNFα biosimilars and orals could add around €3-4/share.
- Positive zilucoplan Phase III gMG data 1H21E allowing for filing and launches from 2022E could add €4/share.
- Bimekizumab approvals in psoriasis from 2021E could add c.€1/share.
- Other pipeline clinical data, notably for rozanolixizumab and padsevonil, could together add around €9/share.
- Catalysts over the next 12-months could boost our NPV sum-of-the-parts valuation to c.€110/share, implying around 19x 2021E P/E.

Downside Scenario

- A more rapid Cimzia decline could lower our NPV valuation up to €3/share.
- Efficacy or safety concerns for zilucoplan could remove up to €14/share.
- Efficacy or safety concerns for bimekizumab could remove up to €9/share.
- Pipeline setbacks, notably for rozanolixizumab and padsevonil, could together remove about €11/share.
- Potential setbacks over the next 12 months could reduce our NPV sum-of-the-parts valuation to c.€55/share, implying around 10x 2021E P/E.

Investment Thesis / Where We Differ

- We are increasingly confident that a wave of new, potentially blockbuster product launches over the next few years should more than offset slow-to-declining sales of key products and continued pipeline investment.
- We believe concerns around the near-term sustainability and growth trajectory of the business are misplaced, with our forecasts 3%-7% above consensus on revenues and 8%-14% above on EPS; our forecasts suggest +8% 2020-23E EPS CAGR.

Catalysts

- Padsevonil drug-resistant epilepsy Phase II data 1H20E and Phase III data 2H21E
- Bimekizumab detailed Phase III psoriasis data during 2020E, with filing mid-20E for approvals and launches from 2021E; Phase III PsA and AS data by YE21E
- Zilucoplan Phase II IMNM data 2H20E; Phase III gMG data 1H21E for launches from 2022E
- Rozanolixizumab Phase III gMG data and Phase II PoC CIDP data 1H21E

Upgrading to Buy with €95 Price Target

We are increasingly confident that a wave of new, potentially blockbuster product launches over the next few years should offset slow-to-declining sales of key products and continued pipeline investment. We believe concerns around the near-term sustainability and growth trajectory of the business are misplaced, with recent pipeline developments helping to drive near-term revenue and EPS growth. These include positive Phase III bimekizumab data, for initial launches in psoriasis from 2021E; a surprise but welcome European approval of Evenity in osteoporosis, expected to launch imminently; and the addition of zilucoplan for myasthenia gravis to the pipeline through the sensible acquisition of Ra Pharma, with potential launches from 2022E. These help drive our above consensus forecasts and suggest sustainable near-term growth, even with increasing biosimilar competition for Cimzia and loss of exclusivity for Neupro (2021E) and Vimpat (2022E), all well flagged. UCB currently trades at c.13x 2021E, below EU Mid-Cap BioPharma peers on c.14x, despite robust growth and superior pipeline optionality, in our view. Our updated €95 per share Price Target, based on NPVs, implies c.16x PE, a c.15-20% premium to peers, which we believe is warranted.

Our €95 per share Price Target is based on an NPV sum-of-the-parts valuation. This could increase to c.€110 per share including potential upside catalysts, most notably if rozanolixizumab clinical data are positive and sufficient for filing across the three main indications. However, there could be downside risk on pipeline setbacks, including with zilucoplan, bimkizumab or rozanolixizumab.

Exhibit 1 - UCB sum-of-the-parts valuation

	Indication	Peak Sales ($mn)	Value (EURmn)	Prob.	Adj. Value (EURmn)	EUR per share
Keppra	Epilepsy	1,850	1,612	100%	1,612	8.3
Keppra XR	Epilepsy (US)	180	45	100%	45	0.2
Cimzia	Crohn's Disease (incl UC)	300	130	100%	130	0.7
	Rheumatoid Arthritis	900	1,581	100%	1,581	8.1
	AxSpA	375	741	100%	741	3.8
	Psoriatic arthritis	350	660	100%	660	3.4
	Psoriasis	250	389	100%	389	2.0
Vimpat	Epilepsy	1,800	1,933	100%	1,933	9.9
Neupro	Parkinson's Disease & Restless leg syndrome	375	231	100%	231	1.2
Nayzilam (midazolam nasal spray)	Acute repetitive seizures	150	221	100%	221	1.1
Briviact	Epilepsy	750	1,951	100%	1,951	10.0
Evenity (romosozumab)	Osteoporosis	1,500	2,053	100%	2,053	10.6
bimekizumab	PsO, PsA & Ankylosing spondyloarthritis	1,500	2,593	90%	2,334	12.0
rozanolixizumab	ITP, gMG and CIDP (prob. 60%, 50%, 30%)	1,325	1,377	100%	1,377	7.1
zilucoplan	gMG and other indications	1,450	3,932	70%	2,753	14.2
padsevonil	Drug-resistant focal epilepsy	750	1,547	50%	774	4.0
Biotech IP Royalties		175	478	100%	478	2.5
Other marketed products		1,700	1,015	100%	1,015	5.2
Net Cash/(Debt)			(1,935)	100%	(1,935)	(9.9)
Valuation			**20,553**		**18,341**	**94.3**

Source: Jefferies estimates

Exhibit 2 - Sources of upside potential and downside risk

	Upside	EUR per share	Downside	EUR per share
Cimzia net price erosion from anti-TNF biosimilars	Minimal impact until mid-2020s	3.5	More rapid decline	(3.1)
zilucoplan Phase III gMG results	Positive for regulatory filings	4.0	Efficacy and/or safety concerns	(14.2)
padsevonil Phase IIb in drug-resistant epilepsy	Positive for regulatory filings	2.4	Fails	(4.0)
rozanolixizumab Phase II CIDP & Phase III gMG/ITP data	Positive for regulatory filings	7.0	Efficacy and/or safety concerns	(7.1)
bimekizumab regulatory approvals	Approved	1.3	Efficacy and/or safety concerns	(9.3)
Potential Upside/(Downside)		**18.3**		**(37.6)**
Potential Valuation		**112.6**		**56.7**

Source: Jefferies estimates

Exhibit 3 - European Biopharma comps

Company	FactSet Ticker	Mkt Cap ($m)	Rating	Price Currency	Price	PE 2019E	PE 2020E	PE 2021E	PE 2022E	CAGR 2020-23E EPS	CAGR 2020-23E Sales	3 Yr PEG 2020
Almirall	ALM-ES	2,879	Buy	EUR	14.7	12.7	14.6	11.6	9.2	20%	9%	0.7
Ipsen	IPN-FR	7,376	Hold	EUR	78.7	11.1	9.5	8.7	8.7	4%	4%	2.5
Lundbeck	LUN-DK	7,454	Hold	DKK	250.0	14.6	17.8	21.4	17.8	13%	4%	1.4
UCB	UCB-BE	15,962	Buy	EUR	73.3	15.6	14.2	12.6	12.4	8%	2%	1.8
EU Biopharma Mid Cap						**13.5**	**14.0**	**13.6**	**12.0**	**11%**	**5%**	**1.6**
ALK	ALK.B-DK	2,499	Hold	DKK	1,648			85.5	40.8	n/a	11%	
Swedish Orphan Biovitrum	SOBI-OME	4,882	Buy	SEK	153	13.4	10.5	8.8	6.6	24%	14%	0.4

Source: Jefferies and FactSet. Stock prices as of close on 06 January 2020. All values are estimates

Evenity back on course

Evenity is a novel "bone-building" anti-sclerostin antibody administered once monthly by subcutaneous injection for 12 months for the treatment of postmenopausal osteoporosis (PMO). Whilst Evenity's clinical effectiveness has largely gone unquestioned, its path to regulatory approval has been far from straightforward after an imbalance in cardiovascular events was observed in the pivotal programme. However, Evenity has now been approved in Japan, the US and Europe, with the US label carrying a Boxed Warning for cardiovascular risk. Evenity is partnered with Amgen, with UCB booking sales in Europe and profits shared 50:50.

- **Peak sales:** $1.5bn WW peak sales, with $830m ex-US; profits are shared 50:50 with partner Amgen
- **NPV:** €11/share based on 100% probability
- **News flow:** Initial launch metrics during 2020E.

Surprise EU CHMP recommendation and subsequent approval

In late October 2019, the European Medicines Agency's Committee for Medicinal Products for Human Use (CHMP) issued a positive opinion for Evenity as a treatment of severe post-menopausal osteoporosis (PMO) in women at high risk of fracture, a surprise positive after the initial negative opinion in June. The European Commission subsequently approved Evenity in December.

The European label includes a contraindication for patients with a history of myocardial infarction (MI) or stroke, largely in-line with the Boxed Warning on Evenity's US label which advises of the increased risk of myocardial infarction (MI), stroke and CV death, and advises that Evenity should not be initiated in patients with an MI/stroke in the last 12 months. Recall in the two pivotal fracture trials in women, there were 51 (0.9%) subjects with major adverse cardiovascular events (MACE) in the control group and 71 (1.3%) subjects with MACE in the Evenity cohort, with a hazard ratio of 1.38. Despite extensive reviews, no clear differences in CV risk factors have been identified between the study populations and no non-clinical evaluations have found a potential mechanism for CV adverse effects.

Evenity is a novel "bone-building" antisclerostin antibody, approved and launched in both the US and Japan, where partner Amgen books sales, hence, approval in Europe would be an important contributor to sustaining UCB's top-line growth ahead of Neupro, Vimpat and Cimzia patent expiries. We forecast $640m US peak sales (c.45%) and $830m ex-US (c.55%), with Japan a significant contributor.

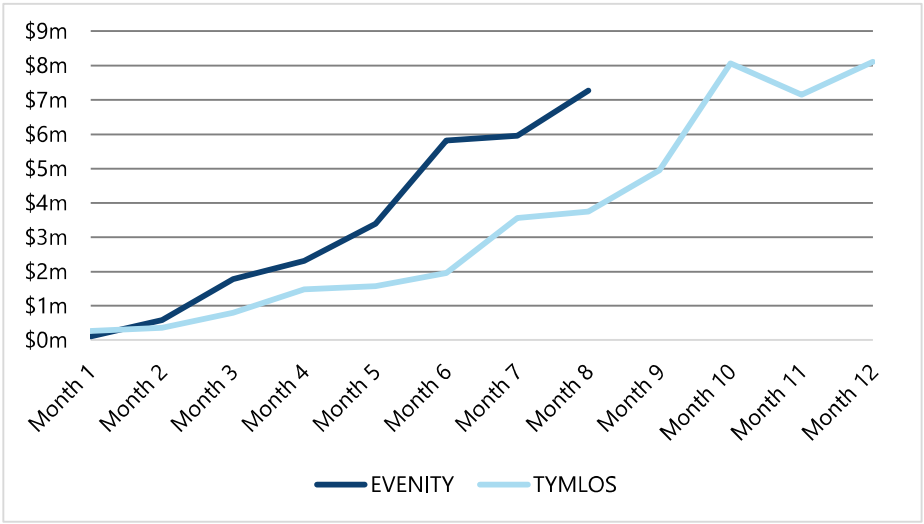
Initial launch metrics encouraging

Evenity was approved in Japan and the US in January and April 2019, respectively. At its 3Q19 update, Amgen reported that Evenity was off to a solid start, with $59m sales +111% QoQ, of which $12m were in the US, and c.45k patients already treated. Whilst

the majority of sales were from Japan, having secured a permanent reimbursement J-code in the US should help accelerate uptake going forwards.

Whilst early in the launch, we are encouraged by the early launch metrics for Evenity in the US, comparing favourably to the launch of Radius health's Tymlos, approved for the treatment of PMO in April 2017, and which carries a Boxed Warning advising of the risk of osteosarcoma. Radius reported Tymlos sales of c.$118m for the 9 months ended 30 September, 2019.

Exhibit 4 - Evenity US launch



Source: IQVIA; Jefferies research

Bimekizumab: Potential to standout in future indications

Bimekizumab has reported impressive headline Phase IIb efficacy data across a number of autoimmune conditions, and more recently Phase III data in psoriasis, supporting the dual IL-17A/F neutralisation mechanism which has been designed to more effectively target both skin and joint inflammation. This approach could lead to improved efficacy over existing therapies, particularly in psoriatic arthritis and ankylosing spondylitis in our view, which we believe represent the most attractive markets for bimekizumab. Phase III trials in each indication are ongoing, with data expected around YE21E. We are more cautious on the potential for bimekizumab in psoriasis, despite recent positive Phase III data given that this is a competitive market, with bimekizumab lagging behind already marketed IL-17s and the newer IL-23s that may be disease modifying, providing a challenging backdrop. Positive data in an ongoing Phase III trial in non-radiographic axial spondyloarthritis could provide upside to our forecasts.

- **Peak sales:** $1.5bn WW in psoriasis, psoriatic arthritis and ankylosing spondylitis
- **NPV:** €12/share based on a 90% probability
- **News flow:** Regulatory filings for psoriasis around mid-2020E and potential approvals during 2H21E; Phase III psoriatic arthritis and ankylosing spondylitis data around YE21E.

The role of IL-17 as a therapeutic target in the treatment of autoimmune diseases is well-established, with three drugs in this class approved in psoriasis and other inflammatory diseases since 2015 (Exhibit 4). The first to market and leader is Novartis' Cosentyx, which we forecast is on track to report c.$3.6bn of sales in 2019 following launches in early 2015. AbbVie's IL-23 Skyrizi has had an impressive launch following its approval for the treatment of psoriasis in April 2019, likely fueled by its competitive efficacy combined with the convenience of less frequent dosing, with injection every 12 weeks after initial doses. As a result, the overall psoriasis market has expanded rapidly to accommodate additional modes of treatment and lines of therapy, as outlined in our Tales from the Script report.

Exhibit 5 - Marketed IL-17s and IL-23s

Product	Company	Mechanism	First Approved	Indications	2018 Sales	2022E Consensus
IL-17s						
Cosentyx (secukinumb)	Novartis	IL-17A	2015 (US and EU: Jan)	PSO; PsA; AS	$2,837m	$4,944m
Taltz (ixekizumab)	Lilly	IL-17A	2016 (US: Mar; EU: Apr)	PSO; PsA; AS	$938m	$2,231m
Siliq/Kyntheum (brodalumab)	Bausch/LEO Pharma	IL-17RA	2017 (US: Feb; EU: Jul)	PSO	NA	NA
IL-23s						
Stelara (ustekinumab)	J&J	IL-12/IL-23	2009 (EU: Jan; US: Sep)	PSO; PsA; CD; UC	$5,156m	$8,842m
Tremfya (guselkumab)	J&J	IL-23	2017 (US: Jul; EU: Nov)	PSO	$544m	$2,364m
Ilumya/Ilumetri (tildrakizumab)	Sun Pharma/Almirall	IL-23	2018 (US: Mar; EU: Sep)	PSO	NA	NA
Skyrizi (risankizumab)	AbbVie	IL-23	2019 (US & EU: Apr)	PSO	NA	$2,073m

Source: VisibleAlpha, Jefferies research, company data. Note: PSO is psoriasis; PsA is psoriatic arthritis; AS is ankylosing spondylitis; CD is Crohn's disease; UC is ulcerative colitis

Growth opportunities for biologics remain

UCB is targeting psoriasis, psoriatic arthritis (PsA) and ankylosing spondylitis (AS) as the main opportunities for bimekizumab. Despite a wave of novel entrants in recent years, opportunities for growth remain, in our view, as highlighted by market data presented by Novartis (Exhibits 5 and 6) and our Cosentyx deep dive. Diagnosis and treatment rates, particularly use of biologics, are much lower than in rheumatoid arthritis (RA), hence there is scope for expansion within these indications, particularly PsA and AS in our view. Further, there are fewer competing new therapies in PsA and AS and

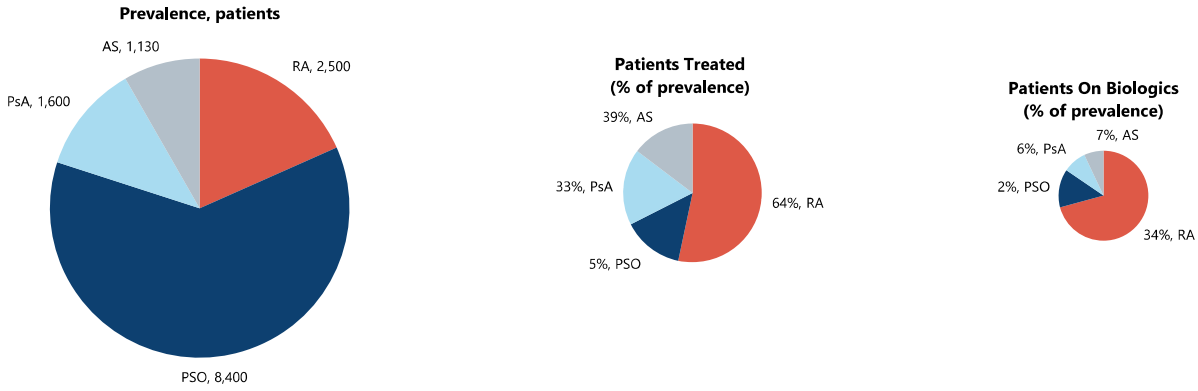
substantially greater potential for increased use of biologics versus psoriasis, which itself lags RA. However, we may see less treatment "cycling" as observed with anti-TNFs, with Cosentyx in particular demonstrating a lower immunogenicity potential i.e. fewer anti-drug antibodies. Together with sustained response rates, this may mean that patients remain on one therapy for longer. This could make it harder for novel entrants to effectively switch patients in the absence of significant differentiation or obvious patient benefits.

Exhibit 6 - Overview of US treatment and diagnosis rates

2016 US patients (000s)	Rheumatoid Arthritis	Psoriasis	Psoriatic Arthritis	Ankylosing Spondylitis	Total (ex RA)
Prevalence	2,500	8,400	1,600	1,130	11,130
Diagnosed (%)	*88%*	*20%*	*63%*	*46%*	*29%*
Patients diagnosed	2,200	1,700	1,000	520	3,220
Treated (%)	*73%*	*25%*	*54%*	*85%*	*43%*
Patients treated	1,600	425	535	440	1,400
Biologics (%)	*53%*	*39%*	*19%*	*19%*	*25%*
Patients on biologics	845	164	100	84	348

Source: Source: Jefferies research, adapted from Novartis November 2017 R&D presentation

Exhibit 7 - A small proportion of patients currently receive any treatment, with even fewer on biologics



Source: Jefferies research, adapted from Novartis November 2017 R&D presentation

Room for upside to our $1.5bn peak sales

We currently forecast WW $1.5bn peak bimekizumab sales by 2028E across psoriasis, psoriatic arthritis and ankylosing spondylitis, of which we assume c.$900m (60%) are in the US. To put this in context, we forecast c.$5.5bn US Cosentyx sales in 2028E. Our bimekizumab forecasts imply only a low c.5% penetration of the psoriatic arthritis market and 1-2% in psoriasis and ankylosing spondylitis. If data suggest bimekizumab could offer benefits over Cosentyx then penetration rates could be substantially higher.

Exhibit 8 - JEFe 2028E bimekizumab and Cosentyx forecasts

	Cosentyx		Bimekizumab	
	JEFe 2028E Penetration	JEFe 2028E US Sales ($m)	Implied Penetration	JEFe 2028E US Sales ($m)
PSO	5% (from 13%)	500	1%	100
PsA	12% (from 15%)	1,500	5%	600
AS	20%	2,100	2%	200
nr-axSpA	25%	1,000	0%	0

Source: Jefferies estimates

Psoriasis the lead but crowded indication

A Phase III programme consisting of three efficacy trials comparing bimekizumab to Stelara, Humira and placebo has reported positive top-line efficacy data, whilst a Phase

IIIb head-to-head trial against Cosentyx is underway, primarily for marketing, in our view with data expected during 2Q20E. Positive headline data for BE VIVID, BE READY and BE SURE were reported during 4Q19, with UCB planning to file bimekizumab in psoriasis around mid-2020E.

The aim of the programme is to demonstrate superiority against the gold standard today (Humira and Stelara) and the anticipated gold standard of tomorrow (Cosentyx). This is an ambitious and costly plan that is not without risk, particularly as novel agents such as Skyrizi have been launched in the interim, which could prove to be highly successful and may alter current market dynamics, potentially rendering any bimekizumab superiority benefits less relevant.

Although we believe this comprehensive approach is needed in order to have any possibility of penetrating the crowded psoriasis market, realising a significant return on investment could be challenging given the competitive backdrop. However, UCB believes psoriasis will provide the fastest route to market, and that a presence in psoriasis will be needed to successfully penetrate the psoriatic arthritis market, given the overlap between the two indications with 30% of psoriasis patients also suffering from psoriatic arthritis. UCB also launched Cimzia in psoriasis during 2H18E, which will provide valuable experience.

All three bimekizumab psoriasis Phase III studies have met the co-primary endpoints of at least a 90% improvement in the Psoriasis Area and Severity Index (PASI90) and Investigator Global Assessment (IGA) score of clear or almost clear (IGA 0/1) at Week 16, importantly showing superiority to Stelara in BE VIVID and Humira in BE SURE. Superiority to Humira is likely to be commercially important, in our view, as we believe bimekizumab is the first IL17 to show superiority to Humira for the treatment of psoriasis, albeit the only one evaluated in a head-to-head trial; of the IL-23s, Tremfya and Skyrizi have also shown superiority to Humira for psoriasis. Bimekizumab also met key secondary endpoints, with detailed data to be presented at a scientific congress during 2020E. Safety was in-line with the earlier studies.

In the Phase IIb BE ABLE bimekizumab dose ranging trial in 250 patients with moderate to severe plaque psoriasis, an impressive 79% of patients on the 320mg dose achieved a PASI90 score; at the same dose c.56% achieved the "clear skin" PASI100, with 60% reaching this outcome on a lower dose (Exhibit 9). The study also suggests bimekizumab has a rapid onset of action, with PASI75 response rates of 70%-80% observed in the higher dose groups as early as week 4. In terms of safety, no unexpected findings were reported with the most common adverse events nasopharyngitis (c.10%) and upper respiratory tract infections (c.6%). Fungal infections, which have been associated with the IL-17 class, were reported in 9 patients (4.3%). There were no cases of anaphylaxis, systemic infections, inflammatory bowel disease or neuropsychiatric events.

Exhibit 9 - Phase III overview

Phase III	Comparator	Endpoints
BE VIVID	Stelara/Placebo	PASI90/IGA 0/1
BE SURE	Humira	PASI90/IGA 0/1
BE READY	Placebo	PASI90/IGA 0/1
BE RADIANT	Cosentyx	PASI100
BE BRIGHT	Pooled safety study	

Source: Jefferies, company data

Exhibit 10 - Bimekizumab Phase IIb BE ABLE efficacy data

	Placebo	64mg	160mg	160mg*	320mg	480mg
PASI75	4.8%	61.5%	81.4%	85.0%	93.0%	83.7%
PASI90	0.0%	46.2%	67.4%	75.0%	79.1%	72.1%
PASI100	0.0%	28.2%	27.9%	60.0%	55.8%	48.8%
IGA (0 or 1)	4.8%	51.3%	74.4%	75.0%	86.0%	76.7%

*Bimekizumab was administered every 4 weeks. Note: *320mg loading dose at baseline*

Source: Jefferies research, adapted from Papp et al J Am Acad Dermatol Vol 79(2):277-286

Bimekizumab efficacy appears to be above the top end of other IL-17s and IL-23s (Exhibit 10), although this is with the usual caveat of cross trial comparisons not being

without risk. Furthermore, the bimekizumab data are from a single Phase IIb trial in a small number of patients at each dose, with a degree of variability associated with PASI scores and with efficacy often more muted in larger Phase III trials - we await detailed Phase III data during 2020E.

Exhibit 11 - Overview of IL-17 and IL-23 efficacy data

	Cosentyx	Taltz	Siliq	Stelara	Tremfya*	Ilumya/Ilumetri	Skyrizi*
	IL-17A	IL-17A	IL-17RA	IL-12/23	IL-23	IL-23	IL-23
PASI75	76%-82%	87%-90%	83%-86%	66%-76%	86%-91%	61%-64%	89%
PASI90	54%-59%	68%-71%	NR	NR	70%-73%	35%-39%	73%-75%
PASI100	NR	35%-40%	37%-44%	NR	34%-37%	12%-14%	36%-51%
sPGA/IGA (0 or 1)	62%-65%	81%-83%	76%-80%	59%-73%	84%-85%	55%-58%	84%-88%
Dosing frequency	Weeks 0, 1, 2, 3 and 4, then qm	Weeks 0, 2, 4, 6, 8, 10 and 12, then qm	Weeks 0, 1 and 2, then q2w	Weeks 0 and 4, then q3m	Weeks 0 and 4, then q2m	Weeks 0 and 4, then q3m	Weeks 0 and 4, then q3m

Source: Jefferies research; FDA and EMA labels. *Week 16 data for Tremfya and Skyrizi; Week 12 for Cosentyx, Taltz, Siliq, Stelara and Ilumya

Impressive data in psoriatic arthritis and ankylosing spondylitis

UCB initiated Phase III programmes in both psoriatic arthritis and ankylosing spondylitis during 1H19, with data expected by YE21E, following impressive Phase IIb data reported in each indication, discussed below. As outlined earlier, we believe these indications could represent the most attractive markets for bimekizumab, owing to both less competition and the potential for bimekizumab to demonstrate greater efficacy than existing treatment options.

The Phase IIb BE AGILE study in 303 patients with ankylosing spondylitis (AS) investigated four doses of bimekizumab versus placebo. Week 12 efficacy data measured by ASAS (Assessment of Spondyloarthritis International Society) response, a patient global assessment of disease activity, physical function, pain and inflammation (Exhibit 11). At the highest bimekizumab doses 46%-47% of patients achieved ASAS40, a 40% disease improvement from baseline, which appears impressive compared to Cosentyx, where 36% of patients achieved this same measure, but with the usual caveats of cross trial comparisons. There were no unexpected safety events, with the most common adverse events nasopharyngitis and headache. At 12 weeks patients initially randomly assigned to receive bimekizumab 160 mg or 320 mg continued on the same dose up to 48 weeks, while those on placebo or lower doses of the drug were reassigned to either of the higher doses in a dose-blind regimen. Updated data were presented at the Association of Rheumatology Professionals (ACR/ARP) Annual Meeting in November, showing that results were maintained in the majority of patients out to Week 48, by which time up to one-third of the 264 patients were in clinical remission (Exhibit 12).

Exhibit 12 - Bimekizumab BE AGILE 12 week efficacy data

Arm	n	ASAS40	ASAS20	ASAS5/6
Placebo	60	13.3%	28.3%	5.0%
16mg	61	29.5%	41.0%	29.5%
64mg	61	42.6%	62.3%	39.3%
160mg	60	46.7%	58.3%	50.0%
320mg	61	45.9%	72.1%	52.5%

Source: Company data; Jefferies

Exhibit 13 - Bimekizumab 48 week efficacy data

Arm	n	ASAS40	ASAS20	ASAS5/6	ASAS PR
Placebo/160mg	24	54.2%	70.8%	62.5%	33.3%
Placebo/320mg	36	50.0%	61.1%	44.4%	22.2%
16mg/160mg	31	35.5%	54.8%	41.9%	12.9%
16mg/320mg	27	40.7%	51.9%	48.1%	29.6%
64mg/160mg	34	55.9%	73.5%	61.8%	20.6%
64mg/320mg	25	64.0%	80.0%	80.0%	28.0%
160mg	60	58.6%	77.6%	63.8%	29.3%
320mg	61	62.3%	75.4%	65.6%	34.4%

Source: Company data; Jefferies research. Note: ASAS PR - ASAS partial remission

In psoriatic arthritis, the Phase IIb BE ACTIVE dose-ranging study in 206 patients reported that significantly more patients achieved the primary endpoint of ACR50 versus placebo at Week 12 ranging from 27%-46% (Exhibit 13), with with the exception of the 320mg dose, which was suggested to be due to this group having more active skin and joint disease than other groups. For context, the FDA approved labels for Cosentyx and Taltz in psoriatic arthritis report that 35%-37% of patients achieved ACR50 on Cosentyx, and 31%-34% on Taltz. In patients treated with bimekizumab also suffering with skin lesions, 65% achieved PASI90 (90% clearance). ACR50 response rates increased by Week 24 and were sustained through to Week 48, with the 320mg cohort now in-line with the other cohorts (Exhibit 14). There were no new safety signals, with nasopharyngitis the most common adverse event.

Exhibit 14 - Bimekizumab BE ACTIVE 12 week efficacy data

Arm	n	ACR20	ACR50	ACR70	MDA
Placebo	42	19.0%	7.1%	4.8%	14.3%
16mg	41	53.7%	26.8%	12.2%	31.7%
160mg	41	70.7%	41.5%	19.5%	46.3%
160mg*	41	61.0%	46.3%	31.7%	41.5%
320mg	41	51.2%	24.4%	14.6%	29.3%

*Note: *320mg loading dose at baseline*

Source: Company data; Jefferies research. Note: MDA - minimal disease activity

Exhibit 15 - Bimekizumab BE ACTIVE 48 week efficacy data

Arm	n	ACR20	ACR50	ACR70	MDA
Placebo/160mg	20	65.0%	40.0%	40.0%	40.0%
Placebo/320mg	20	70.0%	70.0%	40.0%	55.0%
16mg/160mg	22	86.4%	50.0%	27.3%	40.9%
16mg/320mg	19	89.5%	84.2%	52.6%	78.9%
160mg	40	70.0%	55.0%	42.5%	60.0%
160mg*	37	73.0%	56.8%	45.9%	54.1%
320mg	41	75.6%	63.4%	39.0%	46.3%

*Note: *320mg loading dose at baseline*

Source: Company data; Jefferies research. Note: MDA - minimal disease activity

Non-radiographic axial spondyloarthritis could provide upside to our estimates

Bimekizumab is also being evaluated in the Phase III BE MOBILE 1 study in patients with non-radiographic axial spondyloarthritis (nr-axSpA), with first data anticipated during 2021E.

The term nr-axSpA was coined for patients who have a clinical picture of ankylosing spondylitis (AS) but do not exhibit radiographic sacroiliitis, which is inflammation of the sacroiliac joints in the lower spine. The prevalence of nr-axSpA is similar to that of AS and the rate of progression from nr-axSpA to AS ranges from 10% to 20% over 2 years. There are currently limited treatment options for physicians to offer patients with nr-axSpA, with UCB's Cimzia the first FDA drug approved for nr-axSpA in March 2019, and treatments for AS are often used. It is estimated that the nr-axSpA population could be as big as the rheumatoid arthritis population, and therefore if the BE MOBILE 1 study reads out positively this could represent a significant opportunity for UCB.

Dual IL-17A and IL-17F neutralisation

UCB's bimekizumab is the most advanced IL-17A/F in development and in contrast to already approved products, bimekizumab neutralises both IL-17A and IL-17F, which could offer advantages over IL-17A alone or compared to a pan-IL-17. IL-17F is of a similar structure and biological function to IL-17A and has been found, together with IL-17A, in psoriatic skin. UCB believes that dual IL-17A/F inhibition could have improved efficacy compared to IL-17A alone, with both implicated in inflammation and in particular in diseases characterised by both skin and joint inflammation. UCB believes that the addition of IL-17F in particular could act more towards joint inflammation. Bimekizumab preclinical data indicate that dual neutralisation leads to greater inhibition of pro-inflammatory mediators in psoriatic arthritis compared to both IL-17A and IL-17F alone, with IL-17F alone being less potent than IL-17A.

Phase IIb data appear broadly supportive that this approach could lead to efficacy improvements in conditions associated with skin and joint inflammation, such as psoriatic arthritis and ankylosing spondylitis, without any loss of efficacy or worsened safety and tolerability.

Ra Pharma acquisition makes strategic sense

Through UCB's proposed acquisition of Ra Pharma it will gain zilucoplan, a peptide-based C5 inhibitor, in development for complement-mediated diseases. Zilucoplan's lead indication is generalised myasthenia gravis (gMG), with Phase III data expected during 1H21E. We see strategic rationale for the deal given UCB's experience in gMG through rozanolixizumab, zilucoplan's blockbuster potential across a number of indications, and access to Ra's technology platform. The deal is expected to close by end-1Q20E. Our forecasts and valuation now include WW peak zilucoplan sales of c. $1.3bn in gMG, including US peak sales of c.$470m, with first launches in 2022E, with upside potential in other indications, including IMNM.

- **Peak sales:** $1.3bn WW peak sales in gMG, plus c.$1bn in other indications
- **NPV:** €14/share based on a 70% probability
- **News flow:** Phase III gMG data 1H21E with launches from 2022E

Zilucoplan is a peptide-based complement component 5 (C5) inhibitor, currently in Phase III development for generalised myasthenia gravis (gMG), and also for other complement-mediated diseases such as immune-mediated necrotising myopathy (IMNM) and amyotrophic lateral sclerosis (ALS).

Zilucoplan was discovered using Ra Pharmaceutical's platform technology, which produces synthetic macrocyclic peptides that combine the diversity and specificity of antibodies with the pharmacological properties of small molecules, enabling more convenient routes of administration, and the potential to cross the blood brain barrier (BBB) and GI tract, without compromising on the ability to target protein-protein interactions.

Zilucoplan is administered once-daily as a subcutaneous injection, offering potential convenience advantages over Alexion's (Hold; Yang) approved C5 inhibitor Soliris, which requires IV administration every two weeks after a weekly loading regimen over five weeks. Soliris is currently approved for the treatment of gMG, as well as paroxysmal nocturnal haemoglobinura (PNH), atypical hemolytic uremic syndrome (aHUS) and neuromyelitis optica spectrum disorder (NMOSD), and generated sales of $3.6bn during 2018. We note Alexion's long-acting C5 inhibitor Ultomiris, approved for PNH, requires IV dosing only every eight weeks and is in a Phase III trial for gMG with data expected around YE21E.

Exhibit 16 - Ra Pharma Pipeline

Programme	Indication	Stage of Development	Notes
Proprietary programmes			
Zilucoplan	gMG	Phase III	Data 1H21E
	ALS	Phase II/III-ready	Phase II/III HEALY ALS platform trial planned
	IMNM	Phase II-ready	Phase II to initiate by YE19E for data 2H20E; potentially pivotal
	renal disorders	Phase II-ready	Phase Ib trial complete
Zilucoplan XR		Preclinical	Once-weekly dosing; Phase I to initiate during 1H20E
Oral C5 inhibitor		Preclinical	Phase I to start 1H20E
Factor D inhibition	Orphan renal diseases	Preclinical	
Partnered programmes			
Merck collaboration	Cardiovascular disease	Phase I	Undisclosed, non-complement CV target

Source: Jefferies research; company data

MG programme arguably de-risked

The Phase III RAISE study is evaluating daily zilucoplan 0.3mg/kg self-administered subcutaneously (SC) versus placebo in c.130 patients with gMG. The trial began in October 2019, with initial data expected during 1H21E. The primary endpoint is change from baseline in the Myasthenia Gravis-specific Activities of Daily Living (MG-ADL) score at Week 12, with the secondary endpoint the change in Quantitative Myasthenia Gravis (QMG) score.

We believe the programme is largely de-risked, given the established target with C5 antibody Soliris already approved for gMG, plus the impressive Phase II data reported in December 2018.

Compelling Phase II data compare favourably to Soliris

The Phase II trial evaluated two doses of SC zilucoplan, 0.1mg/kg and 0.3mg/kg, versus placebo in 44 patients with gMG in the US and Canada. The trial met the primary endpoint, with the high dose leading to a statistically significant improvement in QMG score versus placebo at Week 12 (p=0.05), also meeting the key secondary endpoint of improving the MG-ADL score (p=0.04), with both findings also considered clinically meaningful, and no patients treated with the high dose requiring rescue therapy. The magnitude, speed of effect (within 2 weeks) and minimal symptom expression (MG-ADL=0 or 1; no disease) all favoured high dose zilucoplan versus low dose. On placebo-corrected minimal symptom expression, c.23% on high dose zilucoplan achieved MG-ADL=0 or 1 at 12 wks, versus only c.14% on low dose.

Zilucoplan was generally well-tolerated, with the majority of reported adverse events (AEs) mild and not considered by the investigators to be related to study drug. There were no serious AEs observed related to treatment with zilucoplan.

Long-term extension study data were presented in May 2019, showing continued improvement in both QMG and MG-ADL scores through Week 24. Furthermore, patients on placebo who crossed over to 0.3 mg/kg zilucoplan at 12 weeks showed rapid reductions in QMG and MG-ADL scores within the first week of treatment and significant improvements from weeks 12-24.

Encouragingly, these data suggest a competitive profile versus Soliris, albeit we await confirmation from the larger ongoing Phase III trial (Exhibit 16).

Exhibit 17 - Selected clinical data comparison in gMG

	Zilucoplan Phase II (n=44)								Soliris Phase III REGAIN (n=125)					
	Placebo		LTE: Placebo cross-over	Zilucoplan 0.1mg/kg		Zilucoplan 0.3mg/kg		LTE: 0.3mg/kg	Placebo			Soliris		
n	15		8	15		14		13	63			62		
	Baseline	12 weeks	12 to 24 weeks	Baseline	12 weeks	Baseline	12 weeks	24 weeks	Baseline	12 weeks	26 weeks	Baseline	12 weeks	26 weeks
QMG	18.7	-3.2	-3.1	18.7	-5.5	19.7	-6.0	-8.7	16.9	c.-1.5	-1.6	17.3	c.-4.0	-4.6
			(p=0.01)		*(p=0.09)*		*(p=0.05)*	*(p<0.0001)*					*(p=0.005)*	*(p=0.001)*
MG-ADL	8.8	-1.1	-3.6	6.9	-3.3	7.6	-3.4	-4.5	9.9	c.-2.0	-2.3	10.5	c.-3.7	-4.2
			(p=0.0004)		*(p=0.05)*		*(p=0.04)*	*(p<0.0001)*					*(p=0.018)*	*(p=0.006)*
AEs	*SAEs: 20% (n=3)* *Common TRAEs: inj.site bruising (7%), headache (7%)* *1 patient withdrew prior to LTE*			SAEs: 0% Common TRAEs: nausea (13%), inj.site bruising/scab (13%/20%), headache (27%)		*SAEs: 35.7%* *Common TRAEs: nausea (14%), headache (14%), contusion (7%)* *1 patient withdrew prior to LTE*			SAEs: 28.6% (n=18) Common TEAEs: headaches (19%), URTI (19%); 0 patients discontinued			*SAEs: 14.5% (n=9)* *Common TEAEs: headaches (16%), URTI (16%); 4 patients discontinued*		

Results are change from baseline

Source: Company data; Jefferies research

Potential for blockbuster sales in gMG alone

Generalized myasthenia gravis (gMG) is a chronic autoimmune neuromuscular disease characterized by skeletal muscle weakness. In MG, antibodies block, alter, or destroy the receptors for the neurotransmitter acetylcholine at the neuromuscular junction, which prevents the muscle from contracting. In the majority, c.85%, the antibodies are directed at the acetylcholine receptor (AChR), but antibodies to other proteins, such as muscle-

specific tyrosine kinase (MuSK) protein, can also lead to impaired transmission at the neuromuscular junction.

Initial treatment is with acetylcholinesterase inhibitors, followed by immunosuppressive therapies, such as corticosteroids or Rituxan, or thymectomy. There then remains a treatment gap until severe exacerbations whereby patients are treated with plasmapheresis/plasma exchange (PLEX), intravenous immunoglobulin (IVIg), or Soliris. Although Soliris' FDA label is broad, its use is primarily limited to refractory gMG, only around 5% of cases, largely due to its high cost and other available treatment options, according to a Jefferies' MG physician survey.

UCB believes that there remains a significant unmet medical need for the c.50% of gMG patients with moderate to severe disease, with zilucoplan potentially offering a long-term treatment option, unlike PLEX and IVIg which are often used for severe acute gMG crises, and as a more convenient, and most likely cheaper option than Soliris, thereby enabling much broader use. Ra/UCB market research suggests patients would be happy with essentially pain-free daily subcutaneous administration of zilucoplan. Hence, whilst positive Ultomiris data in gMG could be a competitive threat, we believe its IV 8 week administration might not be considered that advantageous, plus its likely higher cost and inability to be used in combination with treatments such as IVIg may limit its use to refractory patients, in our view.

Whilst AChR antibodies are IgG1 subclass and lead to complement activation, MuSK antibodies are predominantly of the IgG4 subclass that does not activate complement, hence use of zilucoplan will not be appropriate for the c.10% of patients with MuSK-associated MG.

Should the Phase III replicate the Phase II data, we believe zilucoplan could capture 25% and 20% of the moderate-severe gMG market in the US and Europe, respectively, for $1.3bn WW peak sales (Exhibit 17). Assuming launches in 2022E, this translates to a €14/share NPV (14%), at 70% probability of success, making this potentially one of UCB's most valuable pipeline assets.

Exhibit 18 - Potential zilucoplan peak sales treating gMG

	US	EU	RoW
gMG patients	42,000	55,000	122,000
% AChR+	*85%*	*85%*	*85%*
gMG AChR+	35,700	46,750	103,700
% Uncontrolled on steroids/multiple ISTs	*40%*	*40%*	*40%*
gMG uncontrolled on steroids/multiple ISTs	14,280	18,700	41,480
% requiring IVIG/PLEX	*20%*	*20%*	*20%*
gMG requiring IVIG/PLEX	7,140	9,350	20,740
Penetration of steroid/multiple ISTs	*0%*	*0%*	*0%*
Penetration of IVIG/PLEX	*25%*	*20%*	*15%*
gMG patients treated with zilucoplan	1,785	1,870	3,111
Avg. price/treatment	$250,000	$200,000	$150,000
Zilucoplan gMG sales	**$450m**	**$380m**	**$470m**

Source: Jefferies research

Potential for combination approach with roza

UCB believes that a combination approach utilising zilucoplan and rozanolixizumab could provide a more complete therapeutic offering to patients with gMG through their complementary mechanisms of action. Whilst zilucoplan prevents complement-mediated damage and offers a long-term baseline treatment option, rozanolixizumab,

an anti-FcRn which acts to eliminate auto-antibodies, could be used in patients not eligible for zilucoplan (i.e. MuSK-MG), refractory cases or in acute crises when additional therapy is needed.

This chronic/rescue treatment approach could also be applicable to diseases such as immune-mediated necrotising myopathy (IMNM) and mononeuritis optica.

Rozanolixizumab: Still a tight race

Rozanolixizumab remains in a closely run race to be the first to market anti-FcRn antibody for immunoglobulin G (IgG) mediated autoimmune diseases. Phase III data in myasthenia gravis (MG) are expected during 1H21E, around six months behind the closest competitor. A Phase III registration study in immune thrombocytopenia (ITP) is expected to start imminently. UCB is also targeting a number of other indications characterised by pathogenic IgG auto-antibodies, including chronic inflammatory demyelinating polyneuropathy (CIDP), where we see the most potential, given the market size; a small exploratory Phase II study is ongoing, for data during 1H21E, with the closest competitor about to start a potentially pivotal study in this indication. We anticipate broadly similar efficacy across the anti-FcRn class, with safety and patient convenience benefits likely to be the key differentiators.

- **Peak sales:** $1.3bn based on $450m in MG, $100m in ITP and $750m in CIDP
- **NPV:** €7.0/share based on a 50% probability in MG, 60% in ITP and 30% in CIDP
- **News flow:** Start of ITP Phase III by YE19E; Phase III MG data and Phase II CIDP data during 1H21E

Rozanolixizumab is an anti-FcRn antibody designed to block the neonatal Fc receptor (FcRn), which protects IgG from degradation. This approach could lead to a reduction in serum IgG, with potential in autoimmune conditions characterised by circulating pathogenic IgG auto-antibodies. Rozanolixizumab could replace the use of plasmapheresis/plasma exchange (PLEX) and intravenous immunoglobulin (IVIg), which are often used to treat these diseases. Current development is focused on subcutaneous (SC) administration, which could provide convenience benefits with the potential for patients to self-administer at home, compared to hospitalised use of PLEX and IVIg.

A number of competitor anti-FcRn antibodies are also in development, with the closest argenx's efgartigimod. This is broadly neck and neck with rozanolixizumab in ITP, which we see as having the smallest potential, but is around 6 months ahead of rozanolixizumab in MG. We believe efgartigimod could also be ahead in CIDP, and with a subcut administration, given a potentially pivotal Phase II trial is about to start, outlined in more detail below, whereas UCB is conducting a small proof-of-concept Phase II before potentially initiating a registrational trial in CIDP. However, even if UCB is second to market in the largest indications, commercial experience and the ability to invest in a salesforce will also play roles, with UCB more experienced and with deeper pockets, although this is no guarantee of marketing success.

SC administration of rozanolixizumab remains the main focus for UCB, with argenx pursuing both an IV and SC, including an IV loading dose followed by SC maintenance in ITP. The lack of an IV rozanolixizumab dose could potentially limit its uptake in de novo patients that initially receive hospital based treatment, as we believe physicians will likely prefer to use the same underlying anti-FcRn for both IV and SC administration to minimise the risk of switching, if patients respond well.

Exhibit 19 - Lead anti-FcRns in development

Rozanolixizumab				Efgartigimod			
Indication	Status	News	Formulation	Indication	Status	News	Formulation
MG	Phase III	Data 1H21	SC	MG	Phase III ADAPT	Data 2H20	IV
ITP	Phase III	Start 4Q19	SC	ITP	Phase III ADVANCE	Start 4Q19	IV
					Phase III ADVANCE SC		IV then SC
CIDP	Phase II	Data 1H21	SC	CIDP	Phase II	Start 2H19	SC
				PV	Phase II	Data 1H20	IV

Source: Company data; Jefferies research

Roza's risk-benefit may fall short of key competitor

Direct efficacy comparisons remain challenging, with data reported in different indications, trials, doses and methods of administration, and in small patient numbers. With the usual cross trial comparison caveats, we note that at ASH 2019 Phase II ITP data were presented for both rozanolixizumab and efgartigimod, summarised below. As seen with MG data previously reported, efficacy of multiple weekly lower doses of rozanolixizumab appears milder than efgartigimod, with the higher single doses of rozanolixizumab appearing broadly similar, albeit with a higher incidence of headache. Although these were all reported as mild-to-moderate with none leading to treatment withdrawal, we believe the side effect profile could be a key differentiator, particularly as SC efgartigimod is being investigated in CIDP, putting efgartigimod on a par with rozanolixizumab in terms of potential patient convenience. We understand SC rozanolixizumab administration takes 20-30 minutes whilst subcutaneous efgartigimod in CIDP uses Halozyme's ENHANZE drug delivery technology, which could potentially allow for shorter infusion times.

Exhibit 20 - Phase II ITP data summary

	Rozanolixizumab					Efgartigimod		
	5x4mg/kg	3x7mg/kg	2x10mg/kg	1x15mg/kg	1x20mg/kg	4x5mg/kg	4x10mg/kg	Placebo
Phase II ITP Data	**n=15**	**n=15**	**n=12**	**n=12**	**n=12**	**n=13**	**n=13**	**n=12**
% Patients platelets count ≥50x10^9/L	35.7%	35.7%	45.5%	66.7%	54.5%	53.8%	53.8%	50.0%
Mean IgG reduction at Day 8	26.0%	26.0%	45.0%	50.0%	61.0%			
Maximum mean IgG reduction						60.4%	63.7%	Unchanged
Headache	20.0%	40.0%	25.0%	41.7%	75.0%	7.7%	0.0%	16.7%

Source: Jefferies research; ASH 2019

CIDP remains the largest opportunity, but roza may be behind

Based on current market sizes and dynamics, we see a total market opportunity for PLEX/IVIg alternatives, for the three indications that UCB is currently pursuing, of > $4.5bn (Exhibit 20). This is based on average Hizentra pricing, a SCIg approved for the treatment of CIDP, and assumes no cannibalisation from SCIg. If rozanolixizumab can demonstrate durable efficacy, then pricing could be higher, providing upside. Furthermore, such an outcome could drive higher uptake than current PLEX/IVIg usage, given the short-term benefits associated with these therapies.

Exhibit 21 - Estimated gMG, ITP and CIDP markets for PLEX/IVIg alternatives

	US/EU estimated patients	Potential Market Opportunity	Rozanolixizumab JEFe peak sales estimates
gMG PLEX/IVIg	42,000	$2,000m	$450m
ITP IVIg	3,500	$165m	$100m
CIDP IG Use Data	N/A	$2,500m	$750m
Total		**$4,665m**	**$1,300m**

Source: Jefferies estimates, market opportunity based on c.$47k/year treatment

Small proof-of-concept trial underway

UCB is currently conducting a small proof-of-concept, placebo controlled, Phase II trial of weekly subcutaneous rozanolixizumab in 34 patients with CIDP, with data due 1H21E. The trial is assessing the change in I-RODS score (inflammatory Rasch-built Overall Disability Scale) from baseline over 13 weeks. I-RODS is a patient reported questionnaire consisting of 24 items to assess overall disability and includes items such as reading a book through to running. We understand subcutaneous rozanolixizumab will be administered weekly, albeit the doses have not been disclosed. If data from this trial are positive, we would expect UCB to initiate a registrational programme in CIDP, potentially allowing for launch in CIDP from 2024E.

Competitor about to start potentially pivotal Phase II

Argenx plans to initiate the two-stage ADHERE Phase II trial of ENHANZE subcutaneous efgartigimod in CIDP patients imminently. In order to include patients with active CIDP, diagnosis will be by EFNS/PNS guidelines (European Federation of Neurological Societies/Peripheral Nerve Society), a diagnostic tool used in most CIDP trials, and will also be confirmed by an independent adjudication committee. Patients on treatment will be withdrawn and will need to demonstrate worsening of disease within 12 weeks.

Once active CIDP patients have been identified they will enter Stage A of the trial, an open label treatment period with weekly SC efgartigimod. Patients will need to demonstrate clinical improvement within 12 weeks before they can enter the placebo controlled Stage B portion of the trial. Stage A will also include a go/no-go decision after up to 30 patients have received treatment.

In Stage B, responders will be randomised to weekly placebo or SC efgartigimod for up to 48 weeks with the trial endpoint based on 88 relapse events in Stage B as measured by a one point increase on the adjusted INCAT (Inflammatory Neuropathy Cause and Treatment) disability scale, which has been used as the primary outcome measure in other CIDP trials. Argenx estimates this will require c.120-130 patients to enter Stage B. Stage B will also assess efficacy on a number of other secondary measures including I-RODS and grip strength. Anticipated trial timelines beyond imminent initiation have not been disclosed. Given the size and design of the trial, if positive we believe this could potentially form the basis of efgartigimod regulatory filings in CIDP.

Background on CIDP

Chronic inflammatory demyelinating polyneuropathy (CIDP) is a rare autoimmune neurological disorder that affects peripheral nerves, with inflammation of nerves and nerve roots leading to damage to the myelin sheath. CIDP typically leads to symmetric weakness, numbness or tingling in the extremities (hands and feet) and in the hips and shoulders, owing to the nerve damage, with the disease progressing over at least 8 weeks. This is in contrast to Guillain-Barré syndrome (GBS), which progresses rapidly over 3-4 weeks and is usually preceded by a virus or infection. Treatment is usually with corticosteroids, IV or SC immunoglobulins, including Hizentra (subcutaneous immunoglobulin, SCIg) most recently approved for CIDP, and plasmapheresis/plasma exchange (PLEX).

Prevalence estimates for CIDP vary widely between 1-9 people per 100,000 population, making patient-based sales estimates challenging. However, data from CSL Behring and Baxalta suggest that IG treatment of CIDP represents around 19%-23% of IG usage globally, in a global IG market that was worth c.$8-$9bn in 2014/15, suggesting a significant opportunity of around $2.5bn for immunoglobulins in CIDP.

Padsevonil: Playing to its strengths

Padsevonil for highly drug-resistant epilepsy could be the next string to UCB's bow in epilepsy. Based around a unique dual mechanism that inhibits both pre- and post-synaptic channels, it could have potential in highly-drug resistant epilepsy, an area that remains poorly served. This represents a sizeable opportunity, with around 30% of patients uncontrolled on multiple anti-epileptic drugs (AEDs). Padsevonil has demonstrated a meaningful reduction in seizure frequency in a drug-resistant epilepsy proof-of-concept trial. Data from the ongoing Phase IIb and Phase III studies are expected during 1H20E and 2H21E, respectively. With UCB's experience and expertise in epilepsy, following the commercial successes of both Keppra and Vimpat, we believe UCB is well placed to capitalise on what could be a highly profitable opportunity.

- **Peak sales:** $750m assuming premium pricing to Briviact
- **NPV:** €4.0/share based on a 50% probability and launch in 2022E
- **News flow:** Phase IIb data 1H20E and Phase III data 2H21E.

Padsevonil is a pre- and post-synaptic inhibitor designed for the treatment of highly drug-resistant epilepsy. This affects around 25%-30% of epileptic patients and could be a sizeable opportunity. UCB has launched a number of highly successful drugs in epilepsy, with Keppra reaching a peak of $1.85bn and Vimpat on track to meet our $1.6bn peak sales forecast prior to genericisation from 2022E. Although we remain relatively cautious on the potential for newer entrant Briviact, launched in 2016, we are more intrigued by padsevonil.

Unlike Briviact, which is a more potent version of Keppra with both targeting SV2A, padsevonil has been designed with a unique dual mechanism, with both high affinity to SV2 proteins A, B and C, in addition to moderate affinity to the benzodiazepine site of the GABA-A receptor. Phase IIa data were encouraging with a potentially pivotal Phase IIb ongoing with data expected 1H20E. If this is positive, the ongoing Phase III trial may be sufficient to secure regulatory approvals.

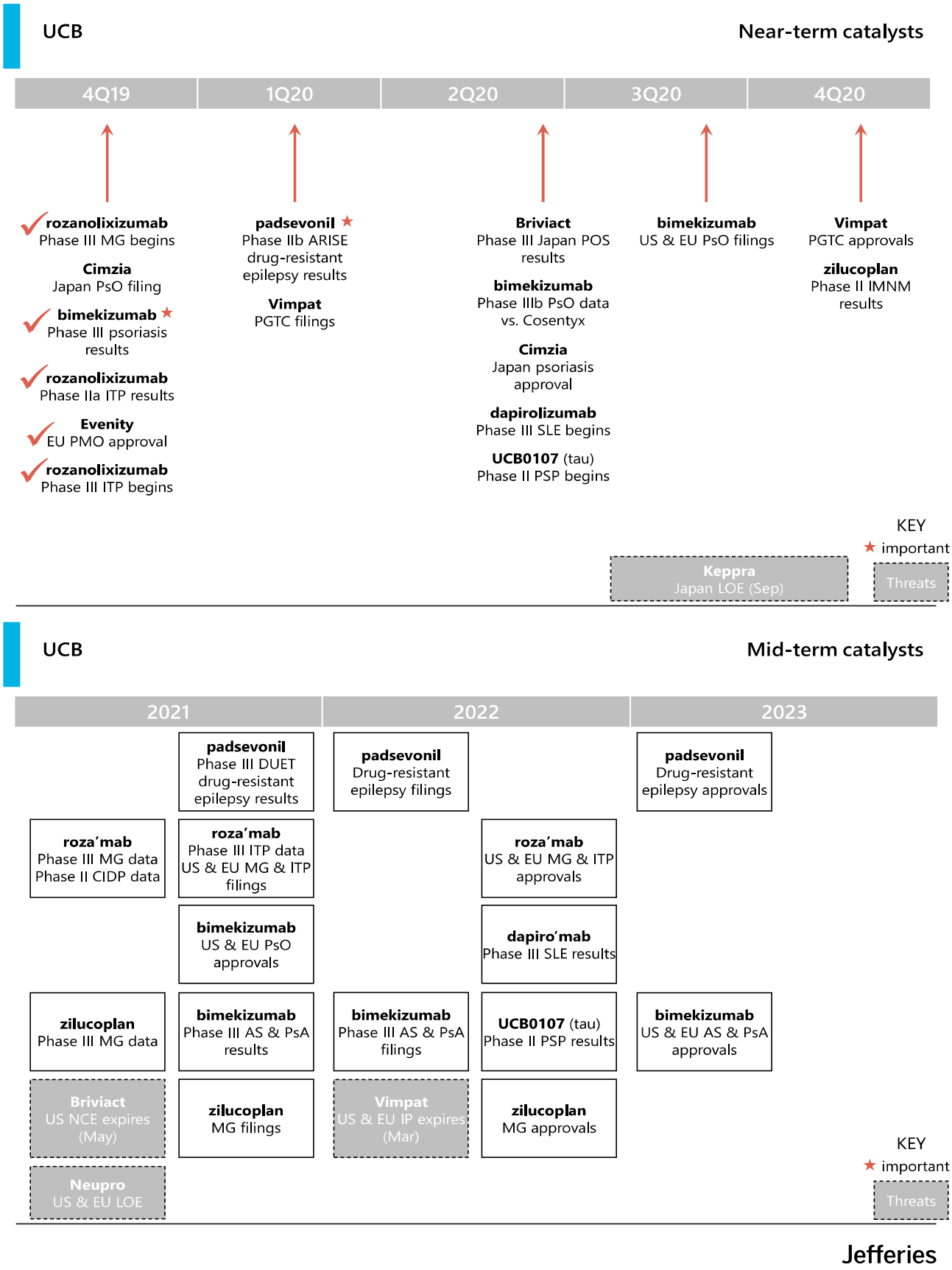
Potentially pivotal Phase IIb ongoing; data 1H20E

The ongoing global Phase IIb dose finding trial is in 400 patients with drug-resistant focal epilepsy who have failed at least four prior AEDs and are experiencing more than four seizures per month. The study is evaluating four doses of padsevonil compared to placebo and will assess seizure frequency from baseline over the 12-week maintenance period in addition to the 75% responder rate, defined as patients experiencing a ≥75% reduction in seizure frequency from a baseline.

Meaningful reduction in seizure frequency in drug-resistant epilepsy

In a Phase IIa trial in 55 patients with drug-resistant focal seizures that had failed on ≥4 previous AEDs and stable on ≥1 AED, padsevonil treatment resulted in around 31% of patients experiencing a ≥75% reduction in seizure frequency from a baseline median frequency of 8.24 (range 3-130.6) seizures per week. The median reduction in weekly seizures was 55%. No patients were seizure free. The most common AEs were 45% somnolence, 44% dizziness and 26% headache, with two patients with serious AEs and 33% experiencing AEs that required a dose change.

Exhibit 22 - UCB Catalysts



Source: Jefferies

Exhibit 23 - UCB Revenue Model

(EUR millions Dec YE)	2018A	2019E 1H19A	2019E 2H19E	2019E	2020E	2021E	2022E	2023E	Prob.
Neurology & CNS	**2,501**	**1,332**	**1,432**	**2,764**	**3,059**	**3,310**	**2,677**	**2,533**	
Keppra	790	371	394	765	797	797	695	625	
US Keppra Sales	*221*	*103*	*114*	*217*	*208*	*198*	*189*	*180*	100%
European Keppra Sales	*216*	*84*	*79*	*163*	*152*	*141*	*131*	*122*	100%
RoW Keppra Sales	*352*	*184*	*202*	*386*	*437*	*458*	*376*	*323*	100%
Vimpat	1,099	622	674	1,296	1,443	1,607	1,068	936	
US Vimpat Sales	*822*	*472*	*510*	*982*	*1,100*	*1,239*	*775*	*657*	100%
ex-US Vimpat Sales	*277*	*150*	*164*	*314*	*342*	*368*	*293*	*279*	100%
Briviact	142	103	122	225	315	418	505	579	
US Briviact Sales	*109*	*81*	*97*	*178*	*251*	*340*	*414*	*476*	100%
ex-US Briviact Sales	*33*	*22*	*26*	*48*	*64*	*78*	*92*	*103*	100%
Nootropil	42	20	18	38	34	31	28	25	100%
Metadate CD	0	0	0	0	0	0	0	0	100%
Neupro	321	158	171	329	331	296	197	122	
US Neupro Sales	*101*	*46*	*59*	*105*	*103*	*89*	*50*	*32*	100%
ex-US Neupro Sales	*220*	*112*	*112*	*224*	*228*	*208*	*147*	*89*	100%
Nayzilam (midazolam nasal spray)	0	0	2	2	29	49	70	94	100%
padsevonil	0	0	0	0	0	0	0	76	50%
Atarax	30	20	10	30	30	30	30	30	100%
Other CNS (incl Xyrem)	77	38	41	79	80	82	83	85	100%
Allergy & Respiratory	**191**	**110**	**56**	**166**	**136**	**112**	**92**	**76**	
Zyrtec (incl Cirrus & Zyrtec-D)	101	50	34	84	70	58	48	40	100%
Xyzal	90	60	22	82	67	55	45	37	100%
Immunology/Inflammation	**1,446**	**782**	**812**	**1,594**	**1,655**	**1,771**	**2,158**	**2,504**	
Cimzia (CDP 870)	1,446	782	812	1,594	1,641	1,653	1,635	1,583	
US Cimzia (CDP 870) Sales	*896*	*480*	*512*	*992*	*1,011*	*1,006*	*987*	*953*	100%
ex-US Cimzia (CDP 870) Sales	*550*	*302*	*300*	*602*	*630*	*647*	*648*	*631*	100%
Evenity (romosozumab) ex-US/Japan	0	0	0	0	14	58	115	183	100%
bimekizumab	0	0	0	0	0	66	328	547	90%
roza'mab (prob. 60% ITP, 50% gMG, 30% CIDP)	0	0	0	0	0	0	42	84	100%
zilucoplan (10% prob. beyond gMG)	0	0	0	0	0	0	102	230	70%
Other Products	**274**	**(5)**	**6**	**1**	**82**	**74**	**66**	**60**	
Net Sales Like-for-Like (Prob. Adjusted)	***4,412***	***2,219***	***2,306***	***4,525***	***4,933***	***5,267***	***4,994***	***5,173***	
Net Sales (Prob. Adjusted)	**4,412**	**2,219**	**2,306**	**4,525**	**4,933**	**5,267**	**4,994**	**5,173**	
Royalties & Fees	**92**	**33**	**37**	**70**	**62**	**60**	**60**	**60**	
Other Revenue (incl M/S & Profit-Share)	**128**	**71**	**71**	**142**	**228**	**266**	**287**	**302**	
Total Group Revenue (Prob. Adjusted)	**4,632**	**2,323**	**2,414**	**4,737**	**5,223**	**5,593**	**5,340**	**5,535**	
% Change Year over Year									
Neurology & CNS	8.6%	10.9%	10.1%	10.5%	10.7%	8.2%	(19.1%)	(5.4%)	
Keppra	1.5%	(5.4%)	(0.9%)	(3.1%)	4.1%	0.0%	(12.7%)	(10.2%)	
Vimpat	12.6%	19.2%	16.8%	17.9%	11.3%	11.4%	(33.6%)	(12.4%)	
Nootropil	(4.5%)	(8.4%)	(10.7%)	(9.5%)	(10.0%)	(10.0%)	(10.0%)	(10.0%)	
Metadate CD	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Neupro	2.2%	6.8%	(1.2%)	2.5%	0.6%	(10.4%)	(33.5%)	(38.2%)	
Atarax	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Other CNS (incl Xyrem)	2.7%	2.7%	1.3%	1.9%	2.0%	2.0%	2.0%	2.0%	
Allergy & Respiratory	(7.7%)	0.9%	(31.7%)	(13.1%)	(17.8%)	(17.7%)	(17.7%)	(17.6%)	
Zyrtec (incl Cirrus & Zyrtec-D)	(1.9%)	(13.8%)	(20.9%)	(16.8%)	(17.2%)	(17.1%)	(17.1%)	(17.0%)	
Xyzal	(13.5%)	17.6%	(43.6%)	(8.9%)	(18.4%)	(18.3%)	(18.3%)	(18.2%)	
Immunology/Inflammation	1.5%	15.2%	5.9%	10.2%	3.9%	7.0%	21.9%	16.0%	
Cimzia (CDP 870)	1.5%	15.2%	5.9%	10.2%	3.0%	0.8%	(1.1%)	(3.2%)	
Other Products	10.9%	(103.2%)	(94.9%)	(99.6%)	8090.0%	(10.0%)	(10.0%)	(10.0%)	
Tussionex	(100.0%)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Net Sales Like-for-Like (Prob. Adjusted)	5.5%	3.4%	1.8%	2.6%	9.0%	6.8%	(5.2%)	3.6%	
FX Impact	*(2.3%)*	*(1.5%)*	*6.3%*	*2.3%*	*0.3%*	*0.0%*	*0.0%*	*0.0%*	
L/C Growth	*8.0%*	*5.0%*	*(4.3%)*	*0.2%*	*8.7%*	*6.8%*	*(5.2%)*	*3.6%*	
Royalties & Fees	(14.8%)	(41.1%)	2.3%	(24.1%)	(10.7%)	(3.5%)	(0.2%)	0.5%	
Total Group Revenue (Prob. Adjusted)	2.3%	2.4%	2.2%	2.3%	10.3%	7.1%	(4.5%)	3.7%	

Source: Jefferies estimates; company data

Exhibit 24 - UCB Profit and Loss Model

(EUR millions except EPS Dec YE)	2018A	2019E 1H19A	2019E 2H19E	2019E	2020E	2021E	2022E	2023E
Net Sales	4,412	2,219	2,306	4,525	4,933	5,267	4,994	5,173
Royalty Income	92	33	37	70	62	60	60	60
Other Revenue	128	71	71	142	228	266	287	302
Revenue	4,632	2,323	2,414	4,737	5,223	5,593	5,340	5,535
Cost of Sales	(1,198)	(598)	(624)	(1,222)	(1,293)	(1,328)	(1,172)	(1,216)
Gross Profit	**3,434**	**1,725**	**1,790**	**3,515**	**3,930**	**4,266**	**4,169**	**4,319**
Total Operating Expenses	(2,329)	(1,154)	(1,313)	(2,467)	(2,800)	(2,979)	(2,837)	(2,917)
Sales & Marketing Expenses	(964)	(502)	(534)	(1,036)	(1,110)	(1,201)	(1,165)	(1,201)
R&D Expenses	(1,161)	(568)	(704)	(1,272)	(1,470)	(1,554)	(1,458)	(1,495)
General & Admin. Expenses	(180)	(96)	(96)	(192)	(210)	(214)	(203)	(209)
o/w Acq'n-related Amortisation/Write-downs	(36)	(18)	(18)	(36)	(36)	(36)	(36)	(30)
Other Operating Income/Expenses	(24)	12	21	33	(10)	(11)	(11)	(12)
Operating Exceptionals	4	27	0	27	0	0	0	0
Operating Income	**1,109**	**598**	**477**	**1,075**	**1,130**	**1,286**	**1,331**	**1,402**
Adjusted Operating Income	**1,275**	**663**	**575**	**1,238**	**1,336**	**1,492**	**1,491**	**1,612**
Net Financial Income	(93)	(53)	(27)	(80)	(80)	(82)	(60)	(40)
Exceptionals	0	0	0	0	0	0	0	0
Income from Associates & JVs	(1)	(1)	0	(1)	0	0	0	0
Pretax Profit	***1,015***	***544***	***450***	***994***	***1,050***	***1,204***	***1,271***	***1,362***
Adjusted Pretax Profit	**1,181**	**609**	**548**	**1,157**	**1,256**	**1,410**	**1,431**	**1,572**
Taxation	(200)	(108)	(91)	(199)	(210)	(241)	(254)	(272)
Minority Interests	(23)	(26)	1	(25)	(15)	(15)	(15)	(15)
Net Income from Continuing Operations	**792**	**410**	**360**	**770**	**825**	**948**	**1,002**	**1,075**
Net Income from Discontinued Operations	8	1	0	1	0	0	0	0
Net Income	***800***	***411***	***360***	***771***	***825***	***948***	***1,002***	***1,075***
Pre-exceptionals Net Income	*795*	*388*	*361*	*749*	*825*	*948*	*1,002*	*1,075*
Adjusted Net Income	**901**	**454**	**431**	**884**	**972**	**1,096**	**1,117**	**1,225**
WA Basic Shares (mn)	188.5	187.2	188.4	188.4	188.5	188.7	188.9	189.1
WA Shares Diluted (mn)	188.5	187.2	188.4	188.4	188.5	188.7	188.9	189.1
EPS (EUR)	***4.24***	***2.20***	***1.91***	***4.09***	***4.38***	***5.03***	***5.31***	***5.68***
Adjusted EPS (EUR)	**4.78**	**2.42**	**2.29**	**4.69**	**5.16**	**5.81**	**5.91**	**6.48**
UCB Core EPS (EUR)	**4.78**	**2.42**	**2.29**	**4.69**	**5.16**	**5.81**	**5.91**	**6.48**
Diluted EPS (EUR)	*4.24*	*2.20*	*1.91*	*4.09*	*4.38*	*5.03*	*5.31*	*5.68*
Diluted Adjusted EPS (EUR)	**4.78**	**2.42**	**2.29**	**4.69**	**5.16**	**5.81**	**5.91**	**6.48**
Dividends Paid and Proposed	(235)			(243)	(272)	(313)	(325)	(364)
Net Dividends per Share Interim/Final (EUR)	0.85			0.87	0.98	1.12	1.17	1.30
% Change Year over Year								
Revenue	2.3%	2.4%	2.2%	2.3%	10.3%	7.1%	(4.5%)	3.7%
Cost of Sales	(0.2%)	4.4%	(0.1%)	2.0%	5.8%	2.7%	(11.8%)	3.8%
Gross Profit	3.1%	1.7%	3.0%	2.3%	11.8%	8.5%	(2.3%)	3.6%
Total Operating Expenses	5.9%	11.1%	1.8%	5.9%	13.5%	6.4%	(4.8%)	2.8%
Sales & Marketing Expenses	2.6%	13.6%	2.3%	7.5%	7.1%	8.2%	(3.0%)	3.1%
R&D Expenses	9.8%	13.6%	6.4%	9.5%	15.6%	5.7%	(6.2%)	2.5%
General & Admin. Expenses	(6.3%)	9.1%	4.3%	6.7%	9.4%	2.0%	(5.2%)	3.0%
Operating Income	2.0%	(11.5%)	10.2%	(3.1%)	5.1%	13.8%	3.5%	5.3%
Adjusted Operating Income	(1.2%)	(9.9%)	6.7%	(2.9%)	7.9%	11.7%	(0.0%)	8.1%
Pretax Profit	2.7%	(13.5%)	14.8%	(2.1%)	5.6%	14.7%	5.6%	7.1%
Adjusted Pretax Profit	(0.8%)	(11.6%)	10.1%	(2.0%)	8.5%	12.3%	1.5%	9.8%
Net Income	6.2%	(25.4%)	41.3%	(3.6%)	7.0%	14.9%	5.7%	7.2%
Adjusted Net Income	(0.7%)	(21.9%)	32.2%	(1.8%)	9.9%	12.7%	1.9%	9.7%
EPS (EUR)	6.1%	(25.0%)	41.3%	(3.6%)	6.9%	14.8%	5.6%	7.1%
Adjusted EPS (EUR)	(0.8%)	(21.5%)	32.3%	(1.8%)	9.9%	12.6%	1.8%	9.6%
UCB Core EPS (EUR)	(0.8%)	(21.5%)	32.3%	(1.8%)	9.9%	12.6%	1.8%	9.6%
Diluted Adjusted EPS (EUR)	(0.8%)	(21.5%)	32.3%	(1.8%)	9.9%	12.6%	1.8%	9.6%

Source: Jefferies estimates; company data

Exhibit 25 - UCB Margin Analysis

		2019E					
	2018A	1H19A	2H19E	2019E	2020E	2021E	2022E	2023E
Gross Margin	74.1%	74.3%	74.1%	74.2%	75.2%	76.3%	78.1%	78.0%
Sales & Marketing Expenses	20.8%	21.6%	22.1%	21.9%	21.3%	21.5%	21.8%	21.7%
R&D Expenses	25.1%	24.5%	29.1%	26.8%	28.1%	27.8%	27.3%	27.0%
General & Admin. Expenses	3.9%	4.1%	4.0%	4.1%	4.0%	3.8%	3.8%	3.8%
Operating Income	23.9%	25.7%	19.8%	22.7%	21.6%	23.0%	24.9%	25.3%
Adjusted Operating Income	27.5%	28.5%	23.8%	26.1%	25.6%	26.7%	27.9%	29.1%
Pretax Profit	21.9%	23.4%	18.6%	21.0%	20.1%	21.5%	23.8%	24.6%
Net Income	17.3%	17.7%	14.9%	16.3%	15.8%	17.0%	18.8%	19.4%

Source: Jefferies estimates; company data

Exhibit 26 - UCB Cash Flow Model

(EUR millions Dec YE)	2018A	2019E	2020E	2021E	2022E	2023E
Net Income from Continuing Operations	792	770	825	948	1,002	1,075
Depreciation and Amortisation	287	316	345	361	328	392
Equity Share-Based Payments	12	70	74	77	81	85
Net Interest Income/(Expense)	61	50	60	67	50	30
Other Financial Income/(Expense)	32	30	20	15	10	10
Income Tax Expense	200	199	210	241	254	272
Minority Interest	23	25	15	15	15	15
Other Adjustments and Exceptionals	(129)	2	0	0	0	0
Adjustments for Non-Cash Items	199	376	378	415	410	412
EBITDA	**1,396**	**1,391**	**1,475**	**1,647**	**1,660**	**1,794**
Pre-exceptionals EBITDA	*1,392*	*1,364*	*1,475*	*1,647*	*1,660*	*1,794*
Recurring EBITDA (UCB)	*1,398*	*1,364*	*1,475*	*1,647*	*1,660*	*1,794*
Decrease/(Increase) in Inventories	(78)	9	(30)	(18)	68	9
Decrease/(Increase) in Receivables	(32)	(7)	(64)	(41)	40	(18)
Increase/(Decrease) in Payables	69	(1)	49	26	(32)	9
Change in WC	*(41)*	*1*	*(44)*	*(33)*	*76*	*1*
Interest Received	20	5	5	8	15	25
Interest Paid	(63)	(55)	(65)	(75)	(65)	(55)
Taxation Paid	(168)	(199)	(207)	(233)	(251)	(268)
Net Cash Flow from Operating Activities	**1,026**	**1,214**	**1,237**	**1,391**	**1,516**	**1,582**
Purchase of Tangible Fixed Assets	(94)	(128)	(167)	(196)	(187)	(194)
Proceeds from Sale of PP&E	1	25	0	0	0	0
Purchase of Intangible Assets	(247)	(147)	(90)	(95)	(99)	(104)
(Purchase)/Sale of Investments	(19)	0	0	0	0	0
(Acquisitions)/Disposals of Subsidiaries	39	42	(1,900)	0	0	0
Dividends Received from Associates	0	0	0	0	0	0
Net Cash Flow from Investing Activities	**(320)**	**(208)**	**(2,157)**	**(290)**	**(286)**	**(298)**
Management of Financial & Other Assets	0	0	0	0	0	0
Capital Changes	(51)	(77)	0	0	0	0
Debt Changes	(202)	(143)	1,099	(400)	(356)	(176)
Equity Dividends Paid	(222)	(228)	(243)	(272)	(313)	(325)
Other Financing Cash Flows	0	1	0	0	0	0
Net Cash Flow from Financing Activities	**(475)**	**(447)**	**856**	**(672)**	**(669)**	**(501)**
Effect of FX on Cash and Cash Equivalents	(16)	0	0	0	0	0
Increase in Cash	**215**	**559**	**(64)**	**429**	**561**	**783**
Change in Net Debt	**(433)**	**(702)**	**1,163**	**(829)**	**(917)**	**(959)**
(Cash Burn)	**706**	**1,006**	**(920)**	**1,101**	**1,230**	**1,284**

Source: Jefferies estimates; company data

Exhibit 27 - UCB Balance Sheet Model

(EUR millions Dec YE)	2018A	2019E	2020E	2021E	2022E	2023E
Non-current Assets	**7,564**	**7,495**	**9,307**	**9,237**	**9,194**	**9,101**
Intangible Assets	5,840	5,795	7,479	7,368	7,307	7,201
Property, Plant and Equipment	805	782	910	951	970	982
Deferred Income Tax Assets	760	760	760	760	760	760
Financial and Other Assets	159	158	158	158	158	158
Current Assets	**2,950**	**3,477**	**3,486**	**3,959**	**4,402**	**5,182**
Inventories	647	638	668	685	617	608
Trade Receivables	616	623	687	728	688	705
Other Receivables (incl Income Tax)	300	270	250	235	225	215
Financial and Other Assets	125	125	125	125	125	125
Cash and Cash Equivalents	1,262	1,821	1,757	2,186	2,747	3,530
Total Assets	**10,514**	**10,972**	**12,793**	**13,195**	**13,596**	**14,283**
Current Liabilities	**2,238**	**2,443**	**2,494**	**2,478**	**2,269**	**2,107**
Trade Payables	364	367	411	432	403	410
Other Current Liabilities (incl Income Tax)	1,478	1,478	1,480	1,488	1,492	1,496
Provisions	51	52	57	61	59	61
Deferred Income	63	0	0	0	0	0
Short-term Debt	111	369	369	350	176	0
Other Current Financial Liabilities	133	133	133	133	133	133
Leasing Obligations	38	38	37	6	0	0
Non-current Liabilities	**2,021**	**1,678**	**2,778**	**2,428**	**2,252**	**2,252**
Long-term Debt	1,287	918	2,049	1,699	1,523	1,523
Other Non-Current Financial Liabilities	32	32	32	32	32	32
Leasing Obligations	63	31	0	0	0	0
Deferred Tax Liabilities	39	39	39	39	39	39
Deferred Income	0	58	58	58	58	58
Long-term Provisions	600	600	600	600	600	600
Total Shareholders' Equity	**6,310**	**6,880**	**7,536**	**8,289**	**9,059**	**9,894**
Share Capital	0	0	0	0	0	0
Share Premium Account & Treasury Shares	2,272	2,195	2,195	2,195	2,195	2,195
Other Reserves and Adjustments	(356)	(356)	(356)	(356)	(356)	(356)
Retained Earnings	4,394	5,041	5,697	6,450	7,220	8,055
Minority Interests	(55)	(30)	(15)	0	15	30
Total Liabilities and Shareholders' Equity	**10,514**	**10,972**	**12,793**	**13,195**	**13,596**	**14,283**

Source: Jefferies estimates; company data

Company Description

UCB

UCB is a global biopharmaceutical company established with the acquisitions of Celltech in 2004 and Schwarz Pharma in 2006. The company focuses on the two core therapeutic areas of CNS and immunology, using both small molecules and biologics. UCB's blockbuster epilepsy drug Keppra peaked in 2008 when the US patent expired. The company's key products are Vimpat (epilepsy), Cimzia (rheumatoid arthritis, Crohn's disease and other autoimmune disorders), and Neupro (Parkinson's disease).

Company Valuation/Risks

UCB

Our Price Target is based on an NPV sum-of-the-parts valuation. Risks include: (1) increased competition and/or reimbursement/ pricing pressures for the core products; (2) accelerated impact on Cimzia from biosimilars; (3) pipeline setbacks notably zilucoplan, bimekizumab and rozanolixizumab.

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(Article 3(1)e and Article 7 of MAR)

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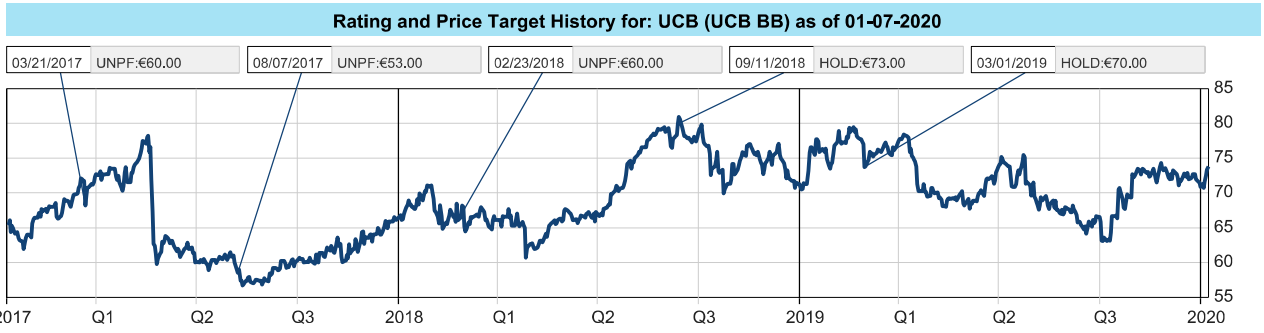
- ALK-Abello A/S (ALKB DC: DKK1,679.00, HOLD)
- Almirall (ALM SM: €14.73, BUY)
- Ipsen (IPN FP: €82.30, BUY)
- Lundbeck (LUN DC: DKK257.00, HOLD)
- Swedish Orphan Biovitrum AB (SOBI SS: SEK153.15, BUY)



Distribution of Ratings

Distribution of Ratings						
			IB Serv./Past12 Mos.		JIL Mkt Serv./Past12 Mos.	
	Count	Percent	Count	Percent	Count	Percent
BUY	1207	52.78%	103	8.53%	14	1.16%
HOLD	926	40.49%	31	3.35%	4	0.43%
UNDERPERFORM	154	6.73%	1	0.65%	0	0.00%

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