Orexo

Capital markets day

Highlighting the opioid dependency market size

Pharma & biotech

Orexo's capital markets day (CMD) emphasised the scale of the US opioid crisis. We have forecast 8.2% market growth pa for US opioid dependency in FY19 and FY20, although external speakers at the CMD suggested this may be higher. Orexo's marketed product Zubsolv, sales of which grew 37% y-o-y in Q318 in SEK, and its other products in development, form a treatment franchise in the growing markets of opioid dependency and related disorders. The recent return of EU Zubsolv rights defers the royalties but this effect is largely absorbed by the CoGS reduction.

Year end	Revenue (SEKm)	PBT* (SEKm)	EPS* (SEK)	DPS (SEK)	P/E (x)	Yield (%)
12/16	705.9	35.6	0.84	0.0	76.7	N/A
12/17	643.7	29.7	0.67	0.0	96.1	N/A
12/18e	858.9	178.5	5.80	0.0	11.1	N/A
12/19e	915.1	214.9	6.02	0.0	10.7	N/A

Note: *PBT and EPS are as reported.

CMD focuses on the opioid dependency market

There are multiple causes of the US opioid epidemic, which resulted in nearly 49,000 deaths in 2017. These include changes to the prescribing guidelines, a focus on pain as a vital sign and promotional practices at certain pharmaceutical companies. Chronic and acute pain was previously thought to cancel out the risk of addiction, but this was long before opioid tolerance and opioid-induced hyperalgesia were recognised. The number of opioid-related deaths and overdoses has risen, as have efforts to reduce opioid dependency. Orexo's marketed product, Zubsolv, has exclusivity until 2032 in the treatment of opioid dependency, while its products in development support this franchise.

Impacts of generic Suboxone and CoGS reductions

The recent US Court of Appeals reversal of the injunction that prevented Dr Reddy's launch of a generic version of Indivior's Suboxone (buprenorphine/naloxone film) will have an impact on the US buprenorphine/naloxone market. The effect on the market share of Orexo's product Zubsolv (a sublingual tablet) could be minor if it mirrors the changes observed on Dr Reddy's brief launch period before the injunction. There may be reasons related to rebates and the effect of promotional spend relative to competitors to believe that Zubsolv's market share could increase as a result of generic films. Orexo's increasing sales of Zubsolv are expected to result in a 35% reduction in CoGS instead of 25% from H219. We have analysed the limited impact of both these dynamics on our valuation of Orexo.

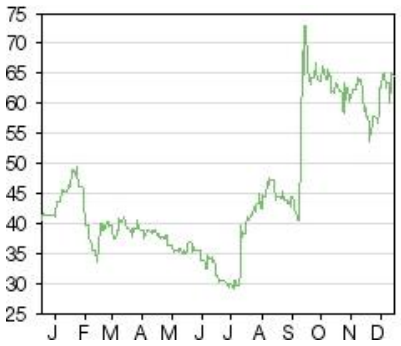
Valuation: Slight changes to our valuation

We have not updated our model to reflect the entry of US generic Suboxone film on Zubsolv's market share as the impact may be minor. Our estimated CoGS now aligns with Orexo's guidance of a 35% reduction from the average CoGS in 2017 effective from H219, although we taper towards 35% from Q119. After updating exchange rates, CoGS and for the return of EU Zubsolv rights (which defers rather than removes EU Zubsolv royalties), our valuation decreases slightly to SEK3.4bn or SEK95.84 per share vs SEK3.4bn or SEK97.06 per share previously.

17 December 2018

Price	**SEK64.40**
Market cap	**SEK2,228m**
	$/SEK9.04; €/SEK10.31
Net cash (SEKm) at end Q318	196.4
Shares in issue	34.6m
Free float	53.8%
Code	ORX
Primary exchange	NASDAQ QMX Stockholm
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	9.7	(9.6)	54.8
Rel (local)	11.9	0.8	64.4
52-week high/low	SEK72.9	SEK29.1	

Business description

Orexo is a Swedish speciality pharma company, with expertise in drug delivery/reformulation technologies (in particular sublingual formulations) and a US commercial infrastructure for its opioid dependence therapy, Zubsolv (out-licensed to partners ex-US). It also has three other clinical assets and a Phase I product, OX124.

Next events

OX124 Phase I read-out	Q119
FY18 results	January 2019
Product in-licensing, partnering & M&A	Ongoing

Analyst

Andy Smith +44 (0)20 3077 5700

healthcare@edisongroup.com

Edison profile page

Capital markets day on opioid dependency

There are multiple causes of the US opioid epidemic, including changes to the 2012 Federation of State Medical Boards (FSMB) guidelines on Responsible Opioid Prescribing, which were in fact less responsible than previously. The American Pain Society's 1996 campaign on pain as the fifth vital sign and the promotional practices at certain pharmaceutical companies were also significant contributors. Whatever the causes, the cumulative effects resulted in more than 72,000 drug overdoses in 2017, with the majority, or nearly 49,000, caused by opioids.[1] A common perception of an opioid-dependent patient is an intravenous recreational user of illegal heroin. However, many more patients now suffering from opioid dependency were initially patients who were legally prescribed opioids as a result of a surgical procedure or injury. In opioid-dependent patients, whether that initial opioid use is legal or illegal, turns into a chronic and accelerating addiction that usually includes both legal and illegal forms of opioids. Should those opioids include the synthetic opioid fentanyl – which is up to 50 times stronger than heroin – the dependency can be much harder to treat and overdose leading to respiratory failure and death is common. In addition, illegal opioids are much more likely to have a fentanyl component these days as fentanyl can be fully synthesized (within the US) and does not rely on an extraction from poppies, the supply of which is seasonal and its importation into the US can be detected.

Another contributor to the US opioid epidemic was indicated by the recent finding that nearly 6% of the almost 15,000 young people between 16 and 25 years of age who received an initial opioid prescription for wisdom teeth extraction by a dentist were diagnosed with opioid abuse within a year.[2] This is the tip of a larger iceberg, with an estimated 20 million cases of substance misuse annually in the US, 12 million involving opioids and about four million patients eligible for treatment. One of the external speakers at Orexo's CMD, from the Clarion Healthcare consultancy, expects this pressure to result in about six million opioid use disorder patients by 2023, about half of whom will seek treatment.

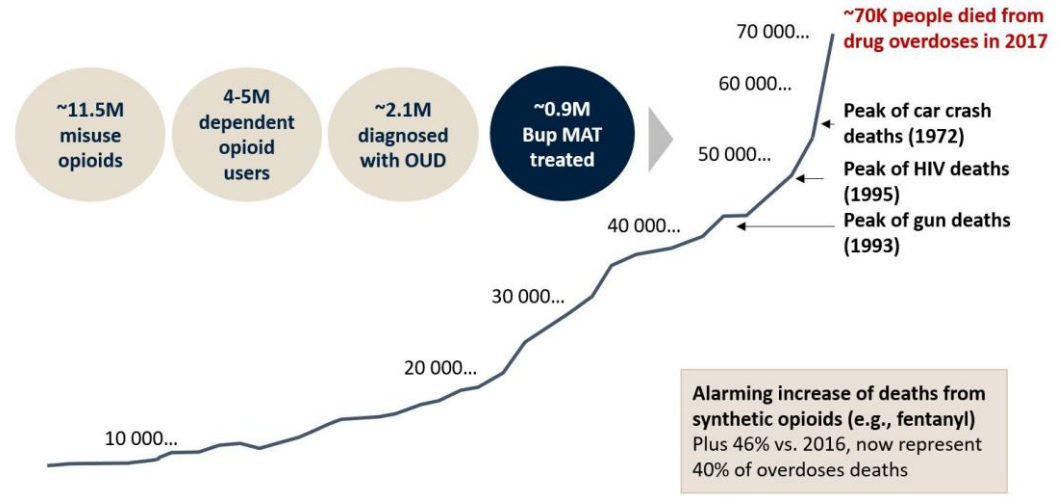
The US Centres for Disease Control and Prevention (CDC) has estimated that the economic burden of prescription opioid misuse is $78.5bn a year. A 2015 study estimated that between 21% and 29% of patients prescribed opioids for chronic pain misuse them. The addictive properties of the opioids have been illustrated by other studies, which have suggested that between 8% and 12% of patients prescribed opioids develop an opioid disorder. As a result, the rates of suspected opioid overdose deaths, let alone the number of patients with an opioid disorder, show no signs of declining (see Exhibit 1 below).

Orexo's CMD included presentations from external speakers, which suggested that the growth in the opioid dependency market may be higher than our estimates. We forecast 8.2% market growth in FY18 and FY19, although our forecasts are based on the value of the market rather than the volume of prescriptions. This is partly due to the chronic nature of opioid dependency, as only a small percentage of patients are ever cured of their addiction without either relapse or long-term treatment. Furthermore, another little-considered driver of the future opioid dependency market is the recent legalisation of both medical and recreational marijuana in some US states and Canada. Recreational marijuana has long been considered a gateway drug to stronger recreational opioid use.

[1] https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm

[2] http://med.stanford.edu/news/all-news/2018/12/opioid-prescriptions-from-dentists-linked-to-youth-addiction-risk.html

Exhibit 1:US drug overdose deaths 1980–2017



Source: Orexo

The rise in prescription and non-prescription use in the US has resulted in increasing numbers of patients suffering what has been described as opioid use disorders. While not all of these patients will seek treatment, a recent article[3] defined opioid use disorders as those that precede medication-assisted treatment (MAT).These included opioid use in increased amounts, or for longer than intended, various behaviours relating to addiction and dependency, the need for increased opioid doses or diminished effect per dose (or both), and various signs and symptoms associated with withdrawal. Opioid-induced hyperalgesia (OIH) was not specifically mentioned as an opioid use disorder, but hypersensitivity to pain resulting from opioids, and requiring increasing opioid dosage, and the pain associated with reduced opioid dosage – the characteristics of OIH –typically tie cancer and chronic pain patients into opioid use disorders, making recovery without effective MAT like Zubsolv almost impossible.

How is Orexo addressing these issues?

Orexo's marketed product Zubsolv contains buprenorphine and naloxone. Buprenorphine is a mixed opioid agonist-antagonist, which blocks the drug-liking effects of opioids in the brain, and reduces withdrawal and craving. Naloxone is an opioid antagonist, which blocks the opioid receptors in the brain, preventing other opioids from binding to the receptors. The combination is typically used as a maintenance therapy in patients who want to stop using opioids, while naloxone alone, as in OX124 (or nalmefene in OX125), is frequently used in the emergency overdose setting. The combination of these products, which contain known active ingredients, the use of prescription data-based analytics, and the ability to negotiate and renew volume-based contracts with commercial and non-commercial payers is unique to Orexo. Zubsolv's US market position could be further enhanced by the withdrawal of the market leader Indivior's promotional spend. In 2018, Zubsolv was the only branded product to gain market share in this genericised category and becoming the only promoted product should result in further market share gains. In addition, there is increasing US government agency support for MAT.

The US Department of Health and Human Services has proposed five major priorities, the first two of which are relevant to Orexo:

- Improving access to treatment and recovery services.
- Promoting the use of overdose-reversing drugs.

[3]N Engl J Med 2016; 375:357-368

In addition, the US National Institutes of Health met with pharmaceutical companies in 2017 and two of the topics of discussion relevant to Orexo were:

- new innovative medications and technologies to treat opioid disorders; and
- improved overdose prevention, and reversal interventions to save lives and support recovery.

Both these active initiatives demonstrate that Orexo's marketed product, Zubsolv (buprenorphine/naloxone sublingual tablets),which is indicated for the treatment of opioid dependency, together with its pipeline products OX124 sand OX125 (in development as opioid overdose rescue medications), fits well into this growing market and with the initiatives proposed to address the effects of opioid dependency.

It is difficult not to conclude that the opioid crisis, as it is now termed in the US, will result in an increase in the number of opioid-dependent patients seeking effective MAT like Zubsolv and that Orexo's products are well-placed to address this growing need.

Sensitivity to generic Suboxone and Zubsolv CoGS

There have been two recent opposing factors that could affect our valuation of Orexo, which were announced after the Q318 results. We have analysed these and discuss their impact on our SEK3.4bn or SEK95.84 per share valuation of Orexo below.

Cost of goods sold (CoGS) improvements

Partly as a result of the higher volumes of Zubsolv being sold by Orexo in the US alone (and independent of partnered volumes), and partly due to improvements in secondary manufacturing processes, Orexo expects that Zubsolv CoGS will fall by 35% in H219 from the average 2017 level vs its previous estimate of a 25% reduction. We have revised our estimated CoGS reduction from Q219 to align with Orexo's guidance and our estimates are shown in Exhibit 2.

Exhibit 2: Current assumptions on Zubsolv's US market share and CoGS

	FY17	FY18	FY19	FY20
Percentage market share	5.0	6.3	7.5	7.6
Percentage Zubsolv CoGS	25.5	18.9	12.6	15.3

Source: Edison Investment Research

We have updated our valuation for these revised CoGS and for foreign exchange rates. The reduction in CoGS from H219 compared to our previous model is responsible for a more significant effect on our per-share valuation, assuming no loss in market share to generic Suboxone film (see below) and almost offsets the deferral of Zubsolv EU royalties. Our CoGS improvements have only taken into account secondary manufacturing (formulation, tableting and packaging), although at its CMD Orexo discussed its initiative to reduce the active pharmaceutical ingredient (API) cost. We have not yet incorporated any primary manufacturing cost savings in our model. The change in foreign exchange rates has a minor impact on our valuation but affects our numbers from the top line down in the income statement. In a competitive genericised market, Orexo is unusual in being a branded company that functions like a generics company in terms of manufacturing. This means that it will drive its CoGS down by continuous improvement so that it can compete with generic companies on price and enable sales growth by volume. Ironically, its branded drug delivery technology also allows a lower dose of the active ingredient (the most expensive component of the formulation), which helps this process. The intellectual property underpinning the formulation of Zubsolv has exclusivity until 2032.

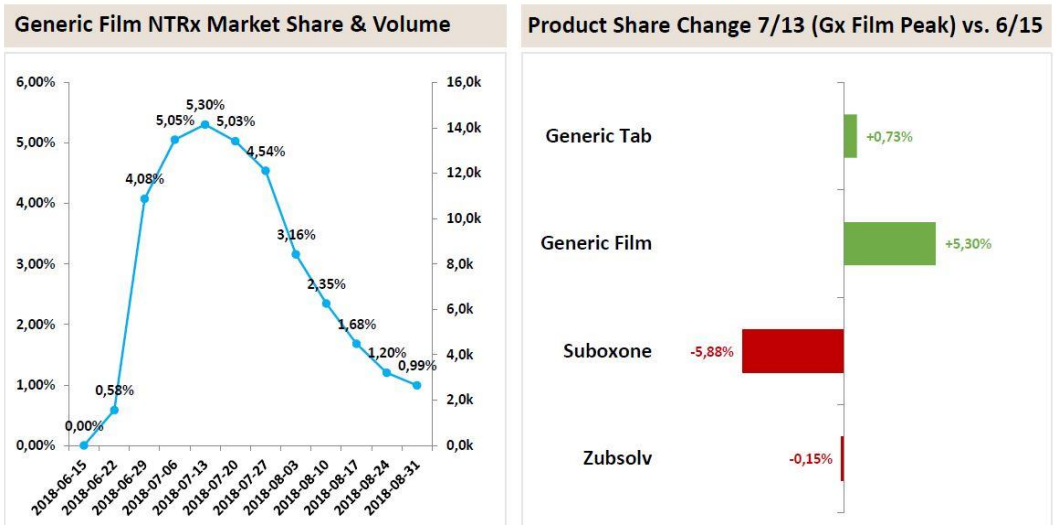
Generic Suboxone film

A recent two-to-one US Court of Appeals ruling[4] reversed the injunction that prevented the progress of Dr Reddy's launch of a generic version of Indivior's Suboxone. Prior to the injunction, Dr Reddy's launched its generic Suboxone film version 'at risk' (meaning the risk of losing three times the profits of the launch if the patent litigation was eventually upheld) for two days and was able to push more than a month's supply into the distribution channel.

This resulted in the market share changes illustrated in Exhibit 3 from Orexo's Q318 results presentation. This generic supply remained in the distribution channel for more than 11 weeks, taking c 6% market share by volume, mainly from Indivior's branded Suboxone film, whose market share was 62% at its lowest.

The effect on Zubsolv volumes was relatively minor, with a 0.15% reduction in market share. Our model assumes a market share for Zubsolv of 6.3–7.5% between FY18 and FY19. However, it should be recognised that Dr Reddy's generic Suboxone film was in the distribution channel for a limited time and was the only generic Suboxone film product available. At some point in the future up to six generic Suboxone products could be launched, including an authorised generic from Indivior although the regulatory approval and launch timings of all but one of those is uncertain.

Exhibit 3:Market share impact of the US launch of generic Suboxone film in Q318



Source: Orexo Q318 results presentation

The sensitivity analysis in Exhibit 4 illustrates the effect of much more drastic, if unlikely, market share reduction impacts on Orexo's share price from our SEK95.84 per share valuation. A 0.2% market share reduction (more than was seen with c six weeks' supply of generic Suboxone film in the channel) resulted in a less than 1% decrease in our per-share valuation. We currently view a significant impact on Zubsolv's market share as unlikely, since the target of a fully substitutable generic Suboxone film is branded Suboxone film, which currently has c 66% of the market by prescriptions. Exhibit 3 illustrates that the impact of generic Suboxone film is likely to have the biggest impact on branded Suboxone film, the market leader, and with c 65% of the buprenorphine/naloxone market in flux, there may even be opportunities for Orexo to acquire market share. We have not included this upside scenario in Exhibit 4, but will review it after Orexo's FY18 results.

[4]Indivior Inc. v. Dr Reddy's Laboratories SA, 18-2167, US Court of Appeals for the Federal Circuit (Washington).

Exhibit 4: Sensitivity of the Orexo share price to market share decreases

Potential loss in market share to film generics	
0.0%	95.84
0.2%	94.92
0.4%	94.01
0.6%	93.11
0.8%	92.22
1.0%	91.36
1.2%	90.51
1.3%	89.68
1.4%	88.87

Source: Edison Investment Research

The reasons Zubsolv will remain competitive

In the month containing most of the generic Suboxone sales, the effect on Zubsolv's market share was relatively minor. This is to be expected for a number of reasons:

- Suboxone film is a different buprenorphine/naloxone formulation from Zubsolv sublingual tablets and contracts for supplying the two formulations may be exclusive. In addition, patient and physician preference for Zubsolv in stable patients may not result in substitution by a generic film formulation.
- Zubsolv sublingual tablets have a lower equivalent dose of controlled drug than Suboxone films and are therefore preferred by physicians and payers because of their lower potential for diversion (abuse and unauthorised resale).
- The US opioid dependency market, and particularly tablet forms of buprenorphine/naloxone, where Zubsolv has been growing its market share, is already highly genericised.
- The lower dose and therefore lower CoGS of Zubsolv already makes it competitive on price, even if it is preferred by public and private payer networks, compared with generic buprenorphine/naloxone tablet formulations, let alone generic Suboxone film formulations, which have a higher CoGS and probably higher net price than Zubsolv.

In addition, the commercial effects of generic competition on a large branded product like Suboxone in a market where other branded and generic products like Zubsolv are differentiated could have positive effects on Zubsolv's market share. This is because:

- the genericisation of Suboxone will result in a cessation of promotion by Indivior and since Orexo will be the only branded or generic company promoting its product, there will be an exclusivity of share of voice for Zubsolv; and
- the genericisation of Suboxone will also remove incentives like subsidies and rebates from the market and allow Orexo to further negotiate competitive market access agreements with payers in an environment that may favour Orexo over generic companies without a dominant competitor like Indivior.

The return of EU Zubsolv rights

After its CMD, Orexo announced that due to a portfolio reorganisation at its partner for Zubsolv in the EU, it would be reacquiring the ex-US rights from Mundipharma on 13 April 2019. This change is associated with minimal expenses that do not affect Orexo's previous financial guidance, and we do not expect any payments to Mundipharma. While the deferral of EU royalties, which we estimate should start again after re-partnering in Q319, is not the best news for Orexo, the EU launch was in its early stages and Orexo will now reacquire a product that has been approved and launched in the EU since it was licensed to Mundipharma. Based on the narrative at Orexo's Q3 results announcement and CMD, we sensed some disappointment with Zubsolv's EU launch. Several other partners have already expressed an interest in re-partnering Zubsolv in the EU, so the

royalties on EU Zubsolv sales have only been deferred, rather than removed. The deferral has no effect on our FY18 forecast, but from Q119 we have estimated that the deferral of royalties from a delayed EU Zubsolv launch will have a negative c 14% impact on our valuation, but most of this will be offset by the CoGS improvements. We will revisit this after the announcement of the new partners, as Orexo may obtain better terms for a later-stage asset than it agreed to with Mundipharma in 2016.

The invest-to-win approach

At its CMD, Orexo reviewed the successful progress on its objectives to 2018 and provided more detail on its objectives from 2019 onwards.

Corporate objectives

Firstly, Orexo aims to expand from its areas of strength by broadening the commercial platform to leverage and expand scale (M&A, below). Secondly, it aims to further accelerate its US performance and EBIT contribution. We interpret this as the growth of the existing US Zubsolv business using the same commercial tactics as Orexo has since 2012 – continuing to sign volume-based contracts with US commercial and government payers(which has resulted in 400,000 Zubsolv tablets being sold each week), and by managing the commercial operation, specifically the salesforce and promotional spend, to physician-level prescription data and analytics. The third objective is to launch at least one new product from its internal R&D pipeline within four years.

M&A

Following the rejection of Actavis's appeal on the invalidity of Orexo's patent, which ensures Zubsolv exclusivity until 2032, Orexo finds itself in a strong position and, for the first time, provided more detail on its M&A efforts and targets. The 'Orexo Perfect Twin' acquisition or merger partner approach was described as one that would allow c SEK300m in synergies pa, with a product commercialised by its own speciality salesforce in the US and a transaction that would not damage the franchise and profitability of the existing organisation. Orexo discussed the potential synergies in its CMD and while over half come from merging the commercial organisations (one salesforce rather than two), other cost savings would come from HQ savings, clinical and manufacturing costs. Our interpretation of why this transaction has not yet been completed is partly due to Orexo's comment that complementary franchises are rare, and partly because the prices of those potential targets have not yet fallen to levels that would enable the company to meet its objectives. This caution should be taken as a positive sign since Orexo is not willing to jeopardise its good fortune and efforts to date by making either the wrong acquisition, or overpaying for the right one.

Internal R&D

Orexo had previously discussed the initiation of a Phase I study of OX124 as a rescue treatment for opioid overdose containing naloxone in a novel formulation in its Q3 results announcement. At the CMD, it expanded on the profiles of OX124 as a spray formulation, as well as OX125 as a spray formulation of nalmefene, again for opioid overdose. The rationale for the development of these two products was made clear despite the availability of an existing naloxone rescue product (Narcan Nasal Spray). This is due to the increased use (described above) of synthetic opioids such as fentanyl. As well as being at least 50 times more as potent than heroin, fentanyl has up to a fivefold longer half-life. This has led to c 34% of opioid overdose patients requiring more than one dose of Narcan. OX124 and OX125 are formulated to reverse the most powerful opioids and have a longer duration of activity to reduce the need for more than one dose.OX124 and OX125 have different active ingredients (naloxone and nalmefene, respectively) and, while OX124 is more advanced,

using an active ingredient that Orexo is used to formulating, the comparative profile and advantages of both products is yet to be determined.

The rise in legal and illegal fentanyl use has had an additional effect on Zubsolv sales since the higher dose (and priced) stock keeping units(SKUs) of Zubsolv were not initially launched in 2014 but were launched subsequently to counter the effects of the availability of, and patient dependence on, the more potent synthetic opioids such as fentanyl. Orexo also described OX338, a non-opioid (ketorolac) sublingual formulation to treat pain which, like OX125, is in preclinical development.

Valuation

We have only modestly updated our forecasts and valuation from SEK3.4bn or SEK97.06 per share to SEK3.4bn or SEK95.84 per share. The changes to foreign exchange rates resulted in minor changes to our valuation, while aligning the reduction in CoGS with Orexo's guidance and return of the Zubsolv EU rights has more significant (c14%) but largely opposing effects. We are not incorporating either a positive or negative impact of the launch of Dr Reddy's generic Suboxone film on Zubsolv's market share until the FY18 results, by which time the effect on Zubsolv's market share and its long-term growth trajectory will be more visible.

Exhibit 5: Financial summary

SEKm	2015	2016	2017	2018e	2019e
Year end 31 December	IFRS	IFRS	IFRS	IFRS	IFRS
INCOME STATEMENT					
Revenue	643.3	705.9	643.7	858.9	915.1
Cost of Sales	(136.1)	(149.6)	(164.4)	(162.1)	(115.1)
Gross Profit	507.3	556.3	479.3	696.8	800.2
Reported operating profit	(169.0)	51.7	57.4	185.6	264.8
Net Interest	(22.1)	(16.1)	(27.7)	(7.1)	(50.0)
Profit before tax (reported)	(191.1)	35.6	29.7	178.5	214.9
Reported tax	(6.9)	(6.5)	(6.5)	26.6	(6.4)
Profit after tax (reported)	(198.0)	29.0	23.2	205.1	208.4
Minority interests	0.0	0.0	0.0	4.6	0.0
Net income (reported)	(198.0)	29.0	23.2	200.5	208.4
Basic average number of shares outstanding	34.0	35.0	35.0	34.6	34.6
EPS - basic reported (SEK)	(5.74)	0.84	0.67	5.80	6.02
EPS - normalised fully diluted	(5.74)	0.84	0.67	5.74	5.92
Revenue growth (%)	12.8	9.7	(8.8)	33.4	6.5
BALANCE SHEET					
Fixed assets	185.9	185.1	176.5	212.2	204.6
Intangible assets	159.1	138.2	121.0	105.6	95.4
Tangible assets	24.7	22.1	20.1	20.5	23.1
Investments & other	2.1	24.8	35.4	86.1	86.1
Current assets	830.4	833.7	827.4	1,114.8	1,330.8
Stocks	398.9	344.2	250.2	150.0	150.0
Debtors	233.4	178.5	249.3	412.5	355.4
Cash & cash equivalents	198.1	282.4	327.9	552.3	825.4
Other	0.0	28.6	0.0	0.0	0.0
Current liabilities	(251.6)	(309.5)	(349.9)	(457.1)	(457.1)
Creditors	0.0	0.0	0.0	0.0	0.0
Short-term borrowings	0.0	0.0	0.0	0.0	0.0
Other	(251.6)	(309.5)	(349.9)	(457.1)	(457.1)
Long-term liabilities	(498.3)	(399.0)	(324.9)	(326.8)	(326.8)
Long-term borrowings	(494.4)	(397.8)	(319.1)	(320.2)	(320.2)
Other long-term liabilities	(3.9)	(1.3)	(5.8)	(6.6)	(6.6)
Net assets	266.5	310.3	329.1	543.1	751.5
Shareholders' equity	266.5	310.3	329.1	543.1	751.5
CASH FLOW					
Operating cash flow before WC and Tax	(119.4)	67.5	108.1	160.4	220.7
Working capital	17.2	88.7	0.0	81.3	57.0
Exceptional & other	(20.6)	(20.8)	(37.2)	(15.4)	(50.0)
Tax	(6.9)	(7.5)	0.0	(16.9)	(6.4)
Net operating cash flow	(102.2)	156.2	146.6	241.7	277.8
Capex	(4.1)	0.5	(1.6)	(4.4)	(4.7)
Acquisitions/disposals	21.8	5.0	0.0	0.0	0.0
Equity financing	3.8	2.2	0.1	0.0	0.0
Other	0.0	0.0	0.0	0.4	0.0
Net cash flow	(80.7)	163.9	145.1	206.9	273.1
Opening Net debt (cash)	209.3	296.3	115.4	(8.8)	(232.1)
Other	(6.4)	17.0	(20.9)	18.9	0.0
Closing Net debt (cash)	296.3	115.4	(8.8)	(232.1)	(505.2)

Source: Company accounts, Edison Investment Research

General disclaimer and copyright

This report has been commissioned by Orexo and prepared and issued by Edison, in consideration of a fee payable by Orexo. Edison Investment Research standard fees are £49,500 pa for the production and broad dissemination of a detailed note (Outlook) following by regular (typically quarterly) update notes. Fees are paid upfront in cash without recourse. Edison may seek additional fees for the provision of roadshows and related IR services for the client but does not get remunerated for any investment banking services. We never take payment in stock, options or warrants for any of our services.

Accuracy of content: All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently verified. Opinions contained in this report represent those of the Edison analyst at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

Exclusion of Liability: To the fullest extent allowed by law, Edison shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out or in connection with the access to, use of or reliance on any information contained on this note.

No personalised advice: The information that we provide should not be construed in any manner whatsoever as, personalised advice. Also, the information provided by us should not be construed by any subscriber or prospective subscriber as Edison's solicitation to effect, or attempt to effect, any transaction in a security. The securities described in the report may not be eligible for sale in all jurisdictions or to certain categories of investors.

Investment in securities mentioned: Edison has a restrictive policy relating to personal dealing and conflicts of interest. Edison Group does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees and contractors of Edison may have a position in any or related securities mentioned in this report, subject to Edison's policies on personal dealing and conflicts of interest.

Australia

Edison Investment Research Pty Ltd (Edison AU) is the Australian subsidiary of Edison. Edison AU is a Corporate Authorised Representative (1252501) of Myonlineadvisers Pty Ltd who holds an Australian Financial Services Licence (Number: 427484). This research is issued in Australia by Edison AU and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. Any advice given by Edison AU is general advice only and does not take into account your personal circumstances, needs or objectives. You should, before acting on this advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a particular financial product you should read any relevant Product Disclosure Statement or like instrument.

New Zealand

The research in this document is intended for New Zealand resident professional financial advisers or brokers (for use in their roles as financial advisers or brokers) and habitual investors who are "wholesale clients" for the purpose of the Financial Advisers Act 2008 (FAA) (as described in sections 5(c) (1)(a), (b) and (c) of the FAA). This is not a solicitation or inducement to buy, sell, subscribe, or underwrite any securities mentioned or in the topic of this document. For the purpose of the FAA, the content of this report is of a general nature, is intended as a source of general information only and is not intended to constitute a recommendation or opinion in relation to acquiring or disposing (including refraining from acquiring or disposing) of securities. The distribution of this document is not a "personalised service" and, to the extent that it contains any financial advice, is intended only as a "class service" provided by Edison within the meaning of the FAA (i.e. without taking into account the particular financial situation or goals of any person). As such, it should not be relied upon in making an investment decision.

United Kingdom

Neither this document and associated email (together, the "Communication") constitutes or form part of any offer for sale or subscription of, or solicitation of any offer to buy or subscribe for, any securities, nor shall it or any part of it form the basis of, or be relied on in connection with, any contract or commitment whatsoever. Any decision to purchase shares in the Company in the proposed placing should be made solely on the basis of the information to be contained in the admission document to be published in connection therewith.

This Communication is being distributed in the United Kingdom and is directed only at (i) persons having professional experience in matters relating to investments, i.e. investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "FPO") (ii) high net-worth companies, unincorporated associations or other bodies within the meaning of Article 49 of the FPO and (iii) persons to whom it is otherwise lawful to distribute it. The investment or investment activity to which this document relates is available only to such persons. It is not intended that this document be distributed or passed on, directly or indirectly, to any other class of persons and in any event and under no circumstances should persons of any other description rely on or act upon the contents of this document (nor will such persons be able to purchase shares in the placing).

This Communication is being supplied to you solely for your information and may not be reproduced by, further distributed to or published in whole or in part by, any other person.

United States

The Investment Research is a publication distributed in the United States by Edison Investment Research, Inc. Edison Investment Research, Inc. is registered as an investment adviser with the Securities and Exchange Commission. Edison relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a) (11) of the Investment Advisers Act of 1940 and corresponding state securities laws. This report is a bona fide publication of general and regular circulation offering impersonal investment-related advice, not tailored to a specific investment portfolio or the needs of current and/or prospective subscribers. As such, Edison does not offer or provide personal advice and the research provided is for informational purposes only. No mention of a particular security in this report constitutes a recommendation to buy, sell or hold that or any security, or that any particular security, portfolio of securities, transaction or investment strategy is suitable for any specific person.

Frankfurt +49 (0)69 78 8076 960
Schumannstrasse 34b
60325 Frankfurt
Germany

London +44 (0)20 3077 5700
280 High Holborn
London, WC1V 7EE
United Kingdom

New York +1 646 653 7026
295 Madison Avenue, 18th Floor
10017, New York
US

Sydney+61 (0)2 8249 8342
Level 4, Office 1205
95 Pitt Street, Sydney
NSW 2000, Australia