EDISON

MorphoSys

Pipeline update

Advancing on all fronts

Pharma & biotech

Both MorphoSys's proprietary and non-proprietary pipelines are advancing well. Data from the trials with its three proprietary clinical products are expected in FY14, as well as new trials with those partnered with GSK and Celgene. It now has two Phase III and eight Phase II in its non-proprietary pipeline, including bimagrumab, which has breakthrough designation from the FDA. MorphoSys is likely to strengthen its portfolio further in 2014 by in-licensing programmes. We increase our valuation to €1.60bn.

Year end	Revenue (€m)	PBT* (€m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
12/11	81.7	20.9	69.4	0.0	N/A	N/A
12/12	51.9	7.1	27.9	0.0	N/A	N/A
12/13e	77.8	10.7	33.3	0.0	N/A	N/A
12/14e	64.5	(16.2)	(38.8)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding intangible amortisation, exceptional items and share-based payments.

Proprietary pipeline: New trials and data in 2014

Following the licensing deals with GSK and Celgene in June 2013, we expect GSK to initiate Phase II trials in rheumatoid arthritis with MOR103, and that Celgene and MorphoSys will expand the clinical trial programme with MOR202. A new trial in chronic lymphocytic leukaemia with MOR208 in combination with lenolidamide is being initiated currently. Data from the Phase Ib multiple sclerosis trial with MOR103 should be published in H114 and data from the Phase II trials in B-cell B-ALL with MOR208 and in multiple myeloma with MOR202 are due in H214.

Non-proprietary pipeline: Gaining momentum

Novartis's bimagrumab has entered Phase III development for the rare muscle-wasting disease sporadic inclusion body myositis and has been granted breakthrough designation by the FDA. Janssen has also progressed two antibodies into Phase II: CNTO3157 for asthma and CNTO6785 for rheumatoid arthritis. The non-proprietary pipeline is gradually expanding and becoming more valuable without any investment by MorphoSys.

In-licensing to strengthen proprietary pipeline

MorphoSys had a cash position of €401.8m at Q313. We estimate that c €150m could be required for the co-development of MOR202, but the company is still able to invest heavily in developing its proprietary pipeline. It is likely that MorphoSys will in-license products, as with MOR208, to obtain preclinical or Phase I products.

Valuation: DCF valuation of €1.60bn

We have increased our valuation from €1.42bn to €1.60bn (€61.20/share), primarily because of the advances in the non-proprietary pipeline and the €84m private placement in September 2014. The main catalysts for the shares in FY14 are expected to be data on its three proprietary clinical products, non-proprietary products advancing in development and potential in-licensing deals.

7 January 2014

Price	**€59.50**
Market cap	**€1,535m**

Net cash (€m) at 30 September 2013	401.6
Shares in issue	25.8m
Free float	89%
Code	MOR
Primary exchange	Frankfurt
Secondary exchange	OTC

Share price performance

%	1m	3m	12m
Abs	12.3	(2.0)	97.4
Rel (local)	9.2	(10.3)	62.8
52-week high/low		€61.10	€28.85

Business description

MorphoSys is a German biotechnology company. It uses its proprietary technologies to develop human antibodies for therapeutic use. It has partnered its lead antibody MOR103 with GSK for inflammatory indications and MOR202 with Celgene for haematological cancer indications.

Next events

FY13 results	28 February 2014
Q113 results	29 April 2014
MOR103 data	H114

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Update: Advancing on all fronts

MorphoSys has had a transformational year with the licensing deals for MOR103 with GSK and MOR202 with Celgene. At the same time, data on MOR208 continue to impress and four products in its non-proprietary pipeline have been advanced into the next stage of clinical development, including bimagrumab, which advanced into Phase III and has been granted breakthrough status by the FDA.

The next 12 months are also expected to be eventful. GSK will probably initiate studies with MOR103, and MorphoSys and Celgene are expected to expand the MOR202 programme. There is also the prospect of MorphoSys in-licensing products to add depth to its proprietary pipeline and forming alliances involving its Ylanthia antibody platform to strengthen is discovery pipeline. In addition, additional non-proprietary antibodies could enter Phase II and Phase III development.

Proprietary pipeline progress

The recent focus of MorphoSys, since it signed the two major deals with GSK and Celgene, has been to transfer the necessary data to its new partners, establish a joint development plan in the case of MOR202 with Celgene, and maintain momentum in the MOR208 programme (Exhibit 1). The company in now also looking at ways to strengthen its proprietary pipeline, which will probably involve in-licensing products, and using its Ylanthia technology platform to obtain promising targets.

The MOR103 (anti-GM-CSF antibody) programme is now largely transferred to GSK and we expect the latter to initiate a Phase II trial in rheumatoid arthritis in H114. MorphoSys' sole responsibility for the development of the antibody is the completion of the Phase Ib study in multiple sclerosis (MS) due in H114. The primary endpoint of the trial is safety, and it would be surprising if safety concerns are raised given the results of the Phase I/II trial in RA. More interesting will be the histological data from the study, which should give an indication of MOR103's potential efficacy in MS. If the data are promising, GSK would be expected to start a Phase II trial in MS. It might also decide to conduct small Phase II trials in patients suffering pain due to inflammation or osteoarthritis (based on animal studies) or in severe asthma (KaloBios is developing a GM-CSF antibody in this indication).

The Phase I trial in multiple myeloma (MM) with MOR202 (anti-CD38 antibody) in combination with lenolidomide (Revlimid) is progressing as expected, with data from the trial due in H214. Before the end of this trial, Celgene and MorphoSys could decide to initiate additional trials in MM and other haematological cancer indications. They will be keen to advance the programme as quickly as possible given the progress of Janssen with Genmab's daratumumab, which also targets CD38. Daratumumab is currently in three Phase II trials in multiple myeloma, another one is due to start soon and Genmab has indicated that further trials in other indications are due to start in 2014.

The capital from the licensing deals and recent €84m equity raise is enabling MorphoSys to advance MOR208 (anti-CD19 antibody) more quickly and potentially take it to market in Europe. There are two Phase II trials ongoing in B-cell acute lymphoblastic leukaemia (B-ALL) and non-Hodgkin’s lymphoma (NHL) and a third one is soon to be initiated in chronic lymphocytic leukaemia (CLL) in combination with lenalidomide. The new trial is an investigator-sponsored trial run by Dr Jennifer Woyach at the Ohio State University; it is believed that MOR208 and lenalidomide should act synergistically.

The data from the first Phase II trial in CLL highlight the potential of the antibody, as 29.6% of the 27 patients achieved an objective response rate (ORR), even though they had been heavily pre-treated (previously reported ORR was 14.8%, but with the maturing of the data some patients classed as having a stable disease are now assessed as having a partial response). It is important

that MorphoSys advances MOR208 quickly, given the competition from five other CD19 therapies in development and approved CD20 antibodies (rituximab, ofatumumab and obinutuzumab).

The rest of MorphoSys' proprietary pipeline is in the discovery phase, about three years from the clinic. The company is looking to use its strong financial position to fill this gap by in-licensing antibodies in preclinical development or Phase I, as it did with MOR208 following the deal with Xencor. The products will probably be in development for haematological cancers, so that potentially they could be marketed by the same sales force as MOR202 (MorphoSys has co-promotion rights in Europe) and MOR208.

MorphoSys also plans to use its Ylanthia antibody platform to develop its early drug discovery pipeline. It will develop novel antibodies against targets identified internally, and use the capabilities of Ylanthia to obtain other interesting targets. Unlike with the HuCAL platform, MorphoSys aims to form alliances with Ylanthia to develop its own pipeline directly, rather than as a means of generating the finances to develop a pipeline, ie new Ylanthia partnerships will probably not result in significant revenue generation.

Some of MorphoSys's discovery programmes could be to develop antibodies against proteins that are not normally targeted with antibodies, such as ion channels. So far, no antibodies that bind to ion channels have been approved, even though c 25% of approved small molecule drugs interact with them. MorphoSys has formed an alliance with Heptares, which has developed a way of stabilising GPCRs in membranes to help enable it to develop antibodies against this class of proteins.

Exhibit 1: Proprietary and licensed clinical R&D pipeline

Product (target)	Development stage (indication)	Notes
MOR103 (GM-CSF)	Phase II (rheumatoid arthritis, multiple sclerosis)	Completed Phase Ib/IIa trial in active RA (four treatments with placebo, 0.3, 1.0 or 1.5mg/kg iv, n=96, double-blind). MOR103 was well tolerated and showed a strong efficacy signal (ACR20 improvement at four weeks was 17.6% with 0.3mg/kg, 60.8% with 1.0mg/kg and 23.0% with 1.5mg/kg). Phase Ib trial in multiple sclerosis (four treatments with placebo, 0.5, 1.0 or 2.0mg/kg iv, n=30, double-blind), primary endpoint: incidence and severity of adverse events; data expected in H114. A Phase I study with subcutaneous formulation showed a favourable pharmacokinetic profile. Phase I (n=63) successfully completed. MorphoSys in-licensed IP relating to role of GM-CSF from Melbourne University. MOR103 was partnered with GSK for an upfront payment of €22.5m, milestones of up to €423m and double-digit royalties on net sales.
MOR208/ Xmab5574 (CD19)	Phase II (chronic lymphocytic leukaemia, B-cell acute lymphoblastic leukaemia, non-Hodgkin's lymphoma)	Phase II study in B-ALL (n=30), data expected in H214; primary endpoint is overall response rate. Phase II study in NHL (n=120), primary completion date estimated to be November 2016, primary endpoint is overall response rate. Phase II study in CLL/SLL in combination with lenalidomide (n=40), primary completion date estimated to be October 2017, primary endpoint is overall response rate. Phase I trial in relapsed/refractory CLL/SLL (small lymphocytic lymphoma; n=30, dose escalation study, open label) showed that MOR208 had acceptable toxicity and 12 out of 16 patients on 12mg/kg had a partial response and the other four had stable disease. MorphoSys in-licensed MOR208 from Xencor for an upfront payment of $13m, milestone payments and royalties. Agreement with Boehringer Ingelheim to manufacture MOR208 for use in clinical trials and potentially for commercial supply.
MOR202 (CD38)	Phase I/II (multiple myeloma and other haematological cancers)	Phase I/II trial in MM with monotherapy dose escalation stage and then in combination with bortezomib and lenalidomide (open label, n=82). Endpoints are maximum tolerated dose, safety, efficacy, PK and PD data and overall response rate, estimated primary completion date is November 2014. MM tumour cells express CD38 in c 98% of patients. Preclinical data show MOR202 acts synergistically with lenalidomide and bortezomib. MOR202 was partnered with Celgene for an upfront fee of $92m (€70.8m), an equity investment of $60m (€46.2m), potential development, regulatory and sales milestones of $666m (€511m), and tiered double-digit royalties outside Europe and 50/50 profit share in Europe; costs will be shared on 33%:67% between MorphoSys and Celgene.

Source: Edison Investment Research

Non-proprietary pipeline progress

The two major licensing deals in 2013 have meant that the development of its clinical pipeline of antibodies from discovery alliances has largely gone unnoticed. It is also easy to underestimate the value of its non-proprietary pipeline (Exhibit 2), because of the relatively low milestones and royalties associated with each programme (Exhibit 3). However, there are now two non-proprietary antibodies in Phase III products, eight in Phase II and six in Phase I, the development risk common to all drug discovery is spread across the portfolio and many of the antibodies are in development for large indications such as Alzheimer's disease, RA and various cancer indications.

Exhibit 2: The clinical R&D pipeline from antibody discovery alliances

Product (target)	Development stage (Indication)	Partner	Notes
Bimagrumab/ BYM338 (Act RIIB*)	Phase III (sporadic inclusion body myositis, cachexia in cancer patients, cachexia in COPD patients, sarcopenia)	Novartis	Phase III trial in sporadic inclusion body myositis (n=240); primary endpoint change from baseline in six-minute walking distance test (6MWD) meters to week 52. Phase II study in cachexia patients with cancer (n=50); primary endpoint is increase in thigh muscle volume in eight weeks; estimated primary completion date was in H113. Phase II study in COPD patients with cachexia (n=60); primary endpoint: increase in thigh muscle volume in six months; estimated primary completion date is September 2014. Phase II in sarcopenia (n=40); primary endpoint: change in thigh muscle at 24 weeks; estimated completion date was December 2013. Phase II study in mechanically ventilated patients (n=30); primary endpoint: increase in thigh muscle volume at 14 days; estimated primary completion date is February 2014. Bimagrumab has FDA breakthrough designation and orphan drug designation in the US and EU in sporadic inclusion body myositis.
Gantenerumab (ß amyloid)	Phase III (Alzheimer's disease)	Roche	Phase III with prodromal Alzheimer's disease (placebo, n=770, double-blind). Primary endpoint is change in Clinical Dementia Rating scale Sum of Boxes (CDR-SOB) and change in brain amyloid. First patient treated: Q410; estimated completion date: September 2016. The trial could be used to support a marketing application for the product. Phase II/III conducted by Washington University in patients with or at risk of early-onset AD, which compares the effect of gantenerumab and Lily's solanezumab. Completed Phase I study in patients with mild to moderate AD (n=60), analysis of 16 patients showed a dose-dependant reduction in brain amyloid level.
Guselkumab/ CNTO1959 (IL-23p19)	Phase II (psoriasis, palmoplantar pustulosis, RA)	J&J (Janssen Biotech)	Phase II in moderate-to-severe psoriasis (placebo and adalimumab, n=280, double-blind), primary endpoint: physician's global assessment (PGA) score; estimated completion date: February 2014. Phase II in palmo-plantar pustulosis (placebo, n=63, double-blind), primary endpoint: change in PPSI total score, estimated completion date: October 2014. Phase II in RA (placebo and ustekinumab, n=274, double-blind), primary endpoint: ACR20 response at 28 weeks; estimated completion date: June 2014. Three Phase I trials (n=47, 24 and 32) completed in healthy people and patients with moderate-to-severe psoriasis; no data published.
Undisclosed	Undisclosed	Novartis	No details have been disclosed because of Novartis's commercial considerations, but Phase II trial due to be completed in H114.
BHQ880 (DKK1)	Phase II (multiple myeloma)	Novartis	Phase II study in patients with MM and renal insufficiency (n=9); primary endpoint is time to first SRE; estimated completion date was June 2013. Phase II trial in smouldering myeloma (n=58); primary endpoint is ORR; expected completion date was October 2013. Phase I/II study completed in relapsed/refractory myeloma (MM) patients (in combination with zoledronic acid and standard-of-care chemotherapy, n=28). Data from the Phase I portion showed increased levels of biomarkers associated with bone formation.
LFG316 (Complement C5)	Phase II (AMD, MCP)	Novartis	Phase II trial in advanced age-related macular degeneration (n=120); primary endpoint: growth of geographic atrophy lesions, expected completion date: June 2014. Phase II study in AMD (n=57), primary endpoint: number of treatments with anti-VEGF therapy, estimated completion date: August 2013. Phase II study in multifocal choroiditis and panuveitis (MCP, n=24), primary endpoint: clinical response rate, estimated completion date: July 2013. Phase I trial in patients with AMD (open label, n=30); trial completed.
OMP-59R5/ (hNotch 2)	Phase II (pancreatic cancer, small-cell lung cancer)	OncoMed/ GSK	Phase I/II study in pancreatic cancer with gemcitabine and nab-paclitaxel (n=154); primary endpoints: safety and PFS; estimated completion date: 2016. Phase I/II study in SCLC with cisplatin and etoposide (n=80); primary endpoints: safety and PFS; estimated completion date: 2017. Phase I (open label, n=44) to assess MTD and preliminary efficacy. Estimated completion date: August 2013.
CNTO3157 (TLR3*)	Phase II (asthma)	J&J (Janssen)	Details of Phase II trial not disclosed. Phase I trial in healthy and asthmatic people inoculated with rhinovirus (n=72, double-blind); primary endpoint: reduction in FEV1 post inoculation; estimated completion date: November 2014. Phase I trial in healthy people (single ascending dose, n= 56, double-blind) and patients with asthma (multiple ascending doses, n=16, double-blind); trial completed, no data published.
CNTO6785 (IL-17a*)	Phase II (rheumatoid arthritis, COPD)	J&J (Janssen)	Phase II study in RA (n=250); primary endpoints: change in ACR20 at week 16; estimated primary completion date: November 2014. Phase II study in COPD (n=170); primary endpoint: Change from baseline in prebronchodilator FEV1 at Week 16; estimated primary completion date: February 2015.
VAY736 (BAFF-R)	Phase II (leukaemia/ inflammation)	Novartis	Disclosed as being in development for leukaemia on Novartis oncology website. Phase II study in pemphigus vulgaris (n=30); primary endpoint: efficacy of single dose at week 12 based on pemphigus disease area index; estimated primary completion date: December 2017.
OMP-18R5/ vantictumab (Frizzled 7)	Phase I (solid tumours)	OncoMed/ Bayer	Phase I dose escalation study (open label, n=44). Trial to assess MTD, safety, PK profile and preliminary efficacy. Estimated completion date: June 2014.
BI 836845* (IGF1, IGF2*)	Phase I (solid tumours)	Boehringer Ingelheim	Two Phase I dose escalation studies (both open label and n=70 and 72). Trials to assess MTD, PK profile, immunogenicity and preliminary efficacy. Estimated completion dates: February 2013 and November 2014.
BAY94-9343 (mesothelin)	Phase I (solid tumours)	Bayer	Phase I dose escalation study (open label, n=58). Trial to assess maximum tolerated dose, safety, PK profile, immunogenicity and preliminary efficacy. Estimated completion date is August 2014. BAY94-9343 is an antibody drug conjugate (ADC).
LJM716 (HER3)	Phase I (oesophageal, head & neck, breast and gastric cancer)	Novartis	Phase I dose escalation study (n=50) in squamous cell carcinoma of head and neck, HER2+ breast or gastric cancer, estimated completion date: June 2014. Phase I dose escalation study (n=50) in combination with trastuzumab in HER2+ breast or gastric cancer, estimated completion date: August 2014. Phase I dose escalation study (n=50) in combination with BYL719 (PI3K inhibitor) in oesophageal squamous cell carcinoma, estimated completion date: 2016.
PF-05082566* (4-1BB/CD137)	Phase I (NHL*)	Pfizer	Phase I dose escalation study (n=78) in combination with rituximab in non-Hodgkin lymphoma initiated in December 2010. Trial to assess MTD, PK profile, immunogenicity and preliminary efficacy. Estimated primary completion date is October 2015.
Undisclosed (Complement C3b*)	Phase I (opthal)	Novartis	Phase I trial initiated in May 2013.

Source: Edison Investment Research, MorphoSys, ClinicalTrials. Note: *Information not disclosed or confirmed by MorphoSys.

Exhibit 3: Typical deal structure of antibody development deals

Milestone/royalties	Value	Notes
Licence fee and R&D funding	€1.5-2.5m	Approximately 50% margin on development costs.
Start of Phase I milestone	€1.0-2.0m	
Start of Phase III milestone	€2.0-3.5m	
BLA and approval milestones	€3.5-5.0m	
Royalties	c 5%	

Source: Edison Investment Research

The changes in the non-proprietary pipeline in H213 are:

- Novartis advanced bimagrumab (BYM338) into Phase III for the orphan disease, sporadic inclusion body myositis (siBM). In this indication, the FDA has granted Novartis breakthrough status, and the product has orphan drug designation in the US and Europe. The antibody also has potential in the larger cachexia market.
- Janssen has started a Phase II trial in asthma with CNTO3157.
- CNTO6785, which was previously an undisclosed programme with Janssen, has progressed into Phase II in RA and COPD.
- Novartis has moved VAY736 into Phase II for the treatment of the rare autoimmune disease, Pemphigus vulgaris, which causes the chronic blistering of skin in c 3.2 per 100,000 people.

It is likely that the non-proprietary clinical pipeline will grow significantly in the coming years. There are currently 22 programmes in preclinical development, less than two years away from entering clinical development, most of which are probably being developed by Novartis, which formed the long-term alliance with MorphoSys in 2008. Not all of these products will be advanced into Phase I development, but it is reasonable to believe that over 50% of them will do so.

Our analysis of company websites, patents and clinicaltrials.gov also indicates that:

- CNTO6785 is an antibody against IL-17a.
- NOV-7 is an antibody against Complement 3b.
- PFE-1 is PF-05082566, an antibody against 4-1BB/CD137.

There will be attrition of the pipeline at various times for clinical and commercial reasons, but the breadth and number of programmes in preclinical development means that the non-proprietary pipeline should gradually develop and become increasingly valuable, without MorphoSys having to make any investments in the products.

Valuation

We increase our valuation from €1.42bn to €1.6bn (€61.20 per share), to take account of the recent advances in the pipeline (Exhibit 4). The main changes to our valuation are:

- Increasing the likelihood of success from 30% to 60% for bimagrumab, following the start of the Phase III clinical trial in siBM and the breakthrough designation by the FDA.
- Adding CNTO6785 to our valuation; previously it was an undisclosed product and therefore not included in our valuation.
- Increase in cash following the €84m private placement.

We have also changed the likelihood of success for CNTO3157 to 30% and VAY736 to 20%, amended our estimates (see below) and altered our discounting of cash flows due to the progression of time.

There is additional upside to our valuation from the two undisclosed Novartis products and the broad preclinical non-proprietary pipeline. This is particularly the case with the Novartis antibody in Phase II, which could be disclosed in 2014 if it advances into Phase III.

Exhibit 4: Valuation of MorphoSys

Value driver	Value (€m)	Value per share (€)	Notes
Partnered discovery	155.2	5.94	DCF valuation of cash flows until 2025; sales in FY12 of €44.7m grow at a CAGR of 4.2% for five years, growth rate then expected to decline to 2% over next four years (includes potential milestones); WACC=10%.
MOR103 royalties in RA	123.5	4.73	For RA, launch date: 2018; peak sales: $1.3bn; risk adjustment: 30%; royalty: 15%.
MOR103 royalties in MS	68.8	2.63	For MS, launch date: 2018; peak sales: $1.5bn; risk adjustment: 15%; royalty: 15%.
MOR103 milestones	85.2	3.26	Risk-adjusted milestones: €50m in 2015, €50m in 2016, €50m in 2017, €150m in 2018, €50m in 2019.
MOR202 royalties outside Europe	137.7	5.27	For MM, launch date: 2017; peak sales: $725m; risk adjustment: 30%; royalty: 17.5%. For NHL and leukaemia, launch date: 2018; peak sales: $960m; risk adjustment: 15%; royalty: 17.5%.
MOR202 profits in Europe	224.2	8.58	For MM, launch date: 2017; peak sales: $600m; risk adjustment: 30%; margin: 30%. For NHL and leukaemia, launch date: 2018; peak sales: $845m; risk adjustment: 15%; margin: 30%.
MOR202 milestones	77.7	2.97	Risk-adjusted milestones: $30m in 2015, $50m in 2015, $100m in 2016, $150m in 2017, $50m in 2018, $50m in 2019.
MOR208 royalties outside Europe	36.9	1.41	For CLL, ALL and NHL, launch date: 2017; peak sales: $540m; risk adjustment: 30%; royalty: 12.5% (effective rate after royalties to Xencor).
MOR208 profits in Europe	105.8	4.05	For CLL, ALL and NHL, launch date: 2017; peak sales: $644m; risk adjustment: 30%; margin (after royalties to Xencor): 27.5%.
Gantenerumab* royalties	56.2	2.15	For AD, launch date: 2018; peak sales: $1.8bn; risk adjustment: 40%; royalty: 5%.
Bimagrumab* royalties	68.5	2.62	For cachexia and siBM, launch date: 2017; peak sales: $1.1bn; risk adjustment: 60%; royalty: 5%.
Guselkumab* royalties	51.2	1.96	For psoriasis and RA, launch date: 2016; peak sales: $1.7bn; risk adjustment: 30%; royalty: 5%.
CNTO6785*	26.0	1.00	For RA, launch date: 2019; peak sales: $1.3bn; risk adjustment: 30%; royalty: 5%.
BHQ880* royalties	14.1	0.54	For MM, launch date: 2016; peak sales: $536m; risk adjustment: 30%; royalty: 5%.
LFG316* royalties	21.4	0.82	For AMD, launch date: 2017; peak sales: $875m; risk adjustment: 30%; royalty: 5%.
CNTO3157* royalties	14.3	0.55	For asthma, launch date: 2019; peak sales: $740m; risk adjustment: 30%; royalty: 5%.
OMP-59R5*	20.5	0.79	For cancer, launch date: 2017; peak sales: $750m; risk adjustment: 30%; royalty: 5%.
VAY736*	9.7	0.37	For inflammation/leukaemia, launch date: 2019; peak sales: $750m; risk adjustment: 20%; royalty: 5%.
Other royalties*	25.3	0.97	OMP-18R5*, BI 836845*, PF-05082566*, LJM716* and BAY 94-9343* for cancer, launch date: 2018-19; peak sales per product: $640-750m; risk adjustment: 10%; royalty: 5%.
Cost of proprietary drug discovery	(93.2)	(3.57)	Risk-adjusted DCF valuation of cash flows until 2018; WACC: 12.5%.
Unallocated costs	(40.3)	(1.54)	DCF valuation of cash flows until 2018; WACC: 12.5%.
Other	7.4	0.29	Grants, capital expenditure, depreciation, and changes in working capital.
Net cash	401.6	15.37	Net cash at Q313
Total	**1,597.7**	**61.17**	

Source: Edison Investment Research. Note: WACC of 12.5% was used on all potential product royalties. Tax rate: 30%. *Non-proprietary products.

Financials

MorphoSys had €401.8m in cash and securities (including investment-grade securities classed as other current asset), after strengthening its balance sheet with a capital raise of €84m at €55.76/share in September 2013 through a private placement. This means the company has the financial strength to fulfil its funding requirements for MOR202 (estimated to be c €150m) and to invest heavily in developing its proprietary pipeline, which will probably involve in-licensing products.

We have amended our estimates as summarised in Exhibit 5, following the capital raise (issuing of 1.5m shares), the upgraded guidance (sales expected to be at upper end of €74-78m range and EBIT of €7-10m instead of €2-6m) and its Q313 results. The main reasons for the increase in guidance were slightly higher than expected sales and lower than anticipated costs for the MOR202 co-development programme with Celgene.

Exhibit 5: Summary of changes to estimates

	Sales			PBT			EPS		
	Old	New	% change	Old	New	% change	Old	New	% change
2013e	77.2	77.8	0.7	5.8	10.7	83.4	25.0	33.3	33.2
2014e	63.7	64.5	1.3	(22.3)	(16.2)	N/A	(60.4)	(38.8)	N/A

Source: Edison Investment Research

Exhibit 6: Financial summary

€'000s	2010	2011	2012	2013e	2014e	2015e
Year end 31 December	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS						
Revenue	87,036	81,717	51,917	77,763	64,522	65,743
Cost of Sales	(7,284)	(0)	0	0	0	0
Gross Profit	79,752	81,717	51,917	77,763	64,522	65,743
EBITDA	15,969	17,826	8,802	13,018	(18,432)	(24,914)
Operating Profit (before GW and except.)	13,834	19,535	6,542	9,382	(18,916)	(25,513)
Intangible Amortisation	(3,985)	(8,338)	(4,050)	(1,400)	(3,903)	(3,487)
Exceptionals/Other	0	0	0	0	0	0
Operating Profit	9,849	11,197	2,492	7,983	(22,819)	(29,000)
Net Interest	4,089	1,412	560	1,290	2,750	2,240
Exceptionals/Other	(767)	(2,139)	0	0	0	0
Profit Before Tax (norm)	17,923	20,947	7,102	10,672	(16,166)	(23,273)
Profit Before Tax (FRS 3)	13,172	10,469	3,052	9,273	(20,068)	(26,760)
Tax	(3,975)	(2,926)	(686)	(2,522)	6,021	8,028
Discontinued operations	0	673	(424)	5,972	0	0
Profit After Tax (norm)	13,948	18,021	6,416	8,150	(10,145)	(15,245)
Profit After Tax (FRS 3)	9,196	8,216	1,942	12,722	(14,048)	(18,732)
Average Number of Shares Outstanding (m)	22.7	22.9	23.0	24.5	26.1	26.1
EPS - normalised (c)	59.2	69.4	27.9	33.3	(38.8)	(58.4)
EPS - FRS 3 (c)	41.6	35.9	8.4	52.0	(53.8)	(71.7)
Dividend per share (c)	0.0	0.0	0.0	0.0	0.0	0.0
Gross Margin (%)	91.6	100.0	100.0	100.0	100.0	100.0
EBITDA Margin (%)	18.3	21.8	17.0	16.7	N/A	N/A
Operating Margin (before GW and except.) (%)	N/A	N/A	N/A	N/A	N/A	N/A
BALANCE SHEET						
Fixed Assets	80,047	73,718	81,430	40,969	38,840	37,056
Intangible Assets	69,208	66,028	35,012	34,508	31,573	29,072
Tangible Assets	6,190	6,106	3,192	2,916	3,722	4,438
Other	4,649	1,583	43,226	3,545	3,545	3,545
Current Assets	132,506	154,693	142,859	406,279	376,478	310,364
Stocks	4,135	3,281	757	778	778	778
Debtors	15,009	12,203	8,924	12,783	10,606	10,807
Cash	108,422	134,365	120,412	288,601	254,956	180,613
Other	4,939	4,843	12,765	104,117	110,138	118,166
Current Liabilities	(21,351)	(23,751)	(11,918)	(38,288)	(33,353)	(33,282)
Creditors	(15,615)	(19,111)	(10,660)	(15,553)	(12,904)	(13,149)
Short term borrowings	0	0	0	0	0	0
Deferred revenues	(3,182)	(1,338)	(628)	(20,841)	(20,049)	(20,049)
Other short term liabilities	(2,554)	(3,302)	(630)	(1,894)	(400)	(84)
Long Term Liabilities	(5,281)	(7,524)	(10,361)	(59,484)	(42,825)	9,984
Long term borrowings	(128)	(74)	(74)	(299)	(299)	(299)
Deferred revenues	(691)	(6,047)	(5,915)	(58,530)	(41,871)	(5,721)
Other long term liabilities	(4,463)	(1,403)	(4,372)	(656)	(656)	16,003
Net Assets	185,922	197,136	202,010	349,475	339,140	324,121
CASH FLOW						
Operating Cash Flow	4,571	28,564	2,077	89,582	(32,642)	(73,967)
Net Interest	121	358	179	828	2,750	2,240
Tax	(2,160)	(1,852)	(466)	(2,711)	(1,495)	(315)
Capex	(13,810)	(3,453)	(2,311)	(4,934)	(2,258)	(2,301)
Acquisitions/disposals	(18,096)	0	0	36,581	0	0
Financing	2,836	1,377	1,607	131,318	0	0
Dividends	0	0	0	0	0	0
Other	(640)	0	(65)	0	0	0
Net Cash Flow	(27,178)	24,994	1,020	250,664	(33,645)	(74,343)
Opening net debt/(cash)	(135,106)	(108,295)	(134,291)	(130,338)	(388,002)	(354,357)
HP finance leases initiated	0	0	0	0	0	0
Exchange rate movements	(51)	(177)	(69)	(4)	0	0
Other	418	1,178	(4,904)	7,004	0	0
Closing net debt/(cash)	(108,295)	(134,291)	(130,338)	(388,002)	(354,357)	(280,015)

Source: Edison Investment Research, company accounts. Note: FY12 net cash includes interest-bearing loans granted by MorphoSys of €10m and in FY13 and subsequent years of €99.7m, which are in the balance sheet under 'other current assets'.

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