3 July 2012 | 19 pages

Pharmaceuticals (GICS) | Drugs (Citi)
Europe | United Kingdom

Shire Pharmaceuticals (SHP.L)

- Company Update
- Estimate Change

Intuniv Overhang Examined; Near-term Settlement Likely*

- **Intuniv a key near-term growth driver; BUY thesis assumes settlement of upcoming patent litigation** — Following *extensive* due diligence with legal experts regarding the upcoming Intuniv patent litigation, we believe that Shire is likely to reach a legal settlement with the generic challengers prior to commencement of the court case (mid-September). Intuniv (ADHD drug, 6% of group sales, c.13% of EBIT) is one of the most important near-term growth drivers for the company, contributing c.20% to the top-line growth CAGR between 2012-2014, on our estimates. A legal settlement will remove a key near-term overhang on the stock and reinforce its attractive 5-year sales and earnings growth profile (6% and 9.5%).
- **Shire unlikely to prevail in court case** — Based on our legal due diligence, we believe that the Delaware court is unlikely to rule in favour of Shire if the company fails to reach a settlement with the generic challengers and the case proceeds to court. A loss in the court case would result in generic competition over the next 12-18 months, and implies 5-12% to our 2013e and 2014e group earnings estimates.
- **Anchen has filed a motion to trigger FTF exclusivity even if Actavis/Shire reach a settlement** — Anchen (one of the generic challengers) has recently filed a motion with the Delaware court to enable it to trigger Actavis' FTF exclusivity and launch its own generic version of Intuniv *even if Shire settles with the first filer*. We believe it is likely that the court will rule in favour of Anchen, forcing Shire to seek a multi-party legal settlement with all the generic challengers simultaneously.
- **Near-term Vyvanse and Lialda generic competition unlikely** — While Shire's Vyvanse (ADHD) and Lialda (ulcerative colitis) patents are also facing generic challenges, the robust patent estate surrounding Vyvanse, and the procedural difficulties associated with the Lialda case, support continued growth of these franchises over the medium-term.
- **Conference call with legal expert at 2pm UKT/9am EDT today** — We will be hosting a legal expert conference call to discuss the Intuniv patent litigation and potential implications for Shire at 2pm UKT / 9am EDT today. Dial-in details: +44 (0)20 3450 9987 (International) / +1 212 444 0481 (US); passcode 6795204.

Buy	**1**
Price (02 Jul 12)	£17.97
Target price	£22.50
Expected share price return	25.2%
Expected dividend yield	0.6%
Expected total return	**25.8%**
Market Cap	£10,109M
	US$15,879M

Price Performance
(RIC: SHP.L, BB: SHP LN)

Shire Pharmaceuticals (USD)

Year to 31 Dec	2010A	2011A	2012E	2013E	2014E
Sales ($M)	3,471.1	4,263.4	4,751.6	4,967.3	5,435.0
Net Income ($M)	797.8	1,027.5	1,165.1	1,301.4	1,493.3
Diluted EPS ($)	1.41	1.78	2.01	2.24	2.52
Diluted EPS (Old) ($)	1.41	1.78	2.01	2.28	2.53
PE (x)	20.0	15.8	14.0	12.6	11.2
EV/EBITDA (x)	15.6	11.6	10.1	8.4	6.8
DPS ($)	0.13	0.15	0.16	0.21	0.25
Net Div Yield (%)	0.5	0.5	0.6	0.7	0.9

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*We correct the content (page 1 and 6) related to Anchen's motion for judgment on the pleading, and the implications for the timing of potential generic Intuniv onto the market, as we initially understood this motion as potentially eliminating Actavis's first filer status; however its purpose is to potentially trigger the first filer status.

SHP.L: Fiscal year end 31-Dec — **Price: £17.97; TP: £22.50; Market Cap: £10,109m; Recomm: Buy**

Profit & Loss (US$m)	2010	2011	2012E	2013E	2014E
Sales revenue	3,471	4,263	4,752	4,967	5,435
Cost of sales	-463	-588	-703	-713	-775
Gross profit	3,008	3,676	4,048	4,254	4,660
Gross Margin (%)	86.6	86.2	85.2	85.6	85.7
EBITDA	**1,050**	**1,404**	**1,572**	**1,769**	**2,005**
EBITDA Margin (%)	30.2	32.9	33.1	35.6	36.9
Depreciation	-256	-295	-106	-113	-124
Amortisation	0	0	-234	-241	-248
EBIT	**794**	**1,110**	**1,232**	**1,415**	**1,633**
EBIT Margin (%)	22.9	26.0	25.9	28.5	30.0
Net interest	-33	-37	-25	-21	-3
Associates	1	3	3	3	3
Non-op/Except	8	18	2	2	2
Pre-tax profit	**771**	**1,093**	**1,211**	**1,399**	**1,635**
Tax	-183	-228	-236	-265	-309
Extraord./Min.Int./Pref.div.	0	0	0	0	0
Reported net profit	**588**	**865**	**975**	**1,134**	**1,326**
Net Margin (%)	16.9	20.3	20.5	22.8	24.4
Core NPAT	798	1,028	1,165	1,301	1,493

Per share data	2010	2011	2012E	2013E	2014E
Reported EPS ($)	1.05	1.51	1.69	1.96	2.25
Core EPS ($)	1.41	1.78	2.01	2.24	2.52
DPS ($)	0.13	0.15	0.16	0.21	0.25
CFPS ($)	1.67	1.86	2.11	2.58	2.77
FCFPS ($)	1.12	1.53	1.77	2.16	2.35
BVPS ($)	4.36	5.78	7.38	9.22	11.35
Wtd avg ord shares (m)	546	551	594	594	594
Wtd avg diluted shares (m)	590	595	595	595	605

Growth rates	2010	2011	2012E	2013E	2014E
Sales revenue (%)	15.4	22.8	11.5	4.5	9.4
EBIT (%)	28.0	39.7	11.0	14.9	15.4
Core NPAT (%)	24.2	28.8	13.4	11.7	14.7
Core EPS (%)	24.2	26.5	13.0	11.4	12.5

Balance Sheet (US$m)	2010	2011	2012E	2013E	2014E
Cash & cash equiv.	577	641	1,569	2,699	2,839
Accounts receivables	693	845	942	985	1,077
Inventory	260	340	407	413	448
Net fixed & other tangibles	1,024	1,057	1,051	1,088	1,113
Goodwill & intangibles	2,381	3,085	2,951	2,812	2,669
Financial & other assets	452	412	412	412	412
Total assets	**5,388**	**6,380**	**7,332**	**8,408**	**8,559**
Accounts payable	95	117	130	136	149
Short-term debt	0	1,100	1,100	1,100	0
Long-term debt	1,108	0	0	0	0
Provisions & other liab	1,733	1,978	2,036	2,095	2,156
Total liabilities	**2,936**	**3,195**	**3,266**	**3,331**	**2,305**
Shareholders' equity	2,451	3,185	4,066	5,077	6,254
Minority interests	0	0	0	0	0
Total equity	**2,451**	**3,185**	**4,066**	**5,077**	**6,254**
Net debt	**531**	**459**	**-469**	**-1,599**	**-2,839**
Net debt to equity (%)	21.6	14.4	-11.5	-31.5	-45.4

Valuation ratios	2010	2011	2012E	2013E	2014E
PE (x)	20.0	15.8	14.0	12.6	11.2
PB (x)	6.5	4.9	3.8	3.1	2.5
EV/EBITDA (x)	15.6	11.6	10.1	8.4	6.8
FCF yield (%)	4.0	5.4	6.3	7.7	8.3
Dividend yield (%)	0.5	0.5	0.6	0.7	0.9
Payout ratio (%)	9	8	8	9	10
ROE (%)	26.9	30.7	26.9	24.8	23.4

Cashflow (US$m)	2010	2011	2012E	2013E	2014E
EBITDA	1,050	1,404	1,572	1,769	2,005
Working capital	41	-160	-113	-4	-76
Other	-136	-171	-237	-261	-286
Operating cashflow	**955**	**1,074**	**1,222**	**1,505**	**1,643**
Capex	-329	-200	-200	-252	-254
Net acq/disposals	-474	-616	0	0	0
Other	6	6	0	0	0
Investing cashflow	**-797**	**-809**	**-200**	**-252**	**-254**
Dividends paid	-62	-74	-94	-123	-150
Financing cashflow	**-100**	**-195**	**-94**	**-123**	**-1,250**
Net change in cash	**52**	**70**	**928**	**1,130**	**140**
Free cashflow to s/holders	**626**	**874**	**1,022**	**1,253**	**1,389**

For further data queries on Citi's full coverage universe please contact Citi Research Data Services at CitiRsch.DataServices.Global@citi.com
For definitions of the items in this table, please click here.

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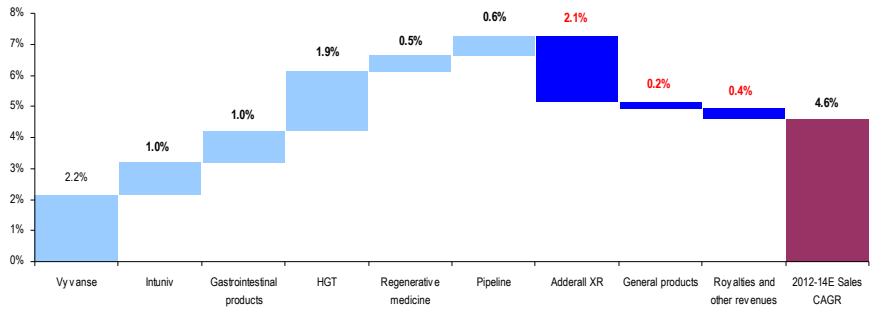
Shire Unlikely to Prevail in Upcoming Intuniv Patent Litigation Case; Near-term Settlement Likely

Shire's history of reaching settlements in patent disputes, along with the importance of Intuniv to near-term growth, increases likelihood of near-term settlement with generic challengers

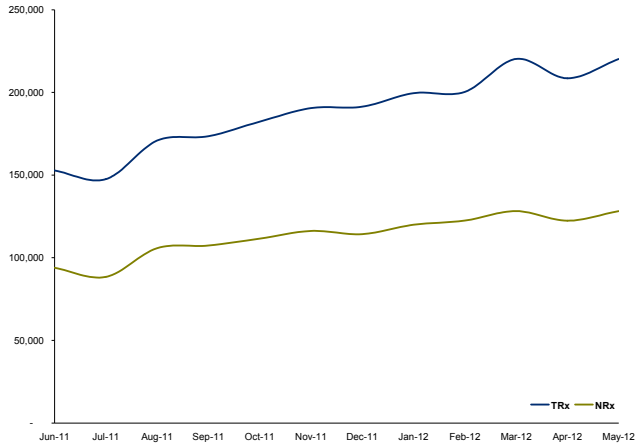
Intuniv a significant contributor to near-term growth; legal settlement would remove a near-term overhang on the stock. Following extensive legal due diligence, we believe that a legal settlement regarding the patent litigation surrounding Shire's ADHD drug, Intuniv (6% of sales, c.12% EBIT), is likely. Intuniv is an important growth driver for Shire over the near- to medium-term, we estimate contributing c.20% to the company's top-line growth CAGR over the upcoming 3 years. Failure to reach a settlement and a loss in the upcoming court case would result in generic competition over the next 12-18 months, and implies 5-12% downside to our 2013e and 2014e earnings estimates, driven by the high profitability of the drug (given Intuniv's primary use is as an adjunctive therapy, it is co-promoted with Vyvanse). We note that Shire has a history of settling its legal patent disputes — over the past decade, multi-party settlements have been reached on Adderall XR, Carbatrol and Fosrenol. The company has publicly stated its preference for settling the Intuniv patent dispute in order to protect the drug's growth and provide certainty to investors.

Figure 1. Intuniv contributes c.20% to Shire's 2012-2014e sales CAGR, on our estimates



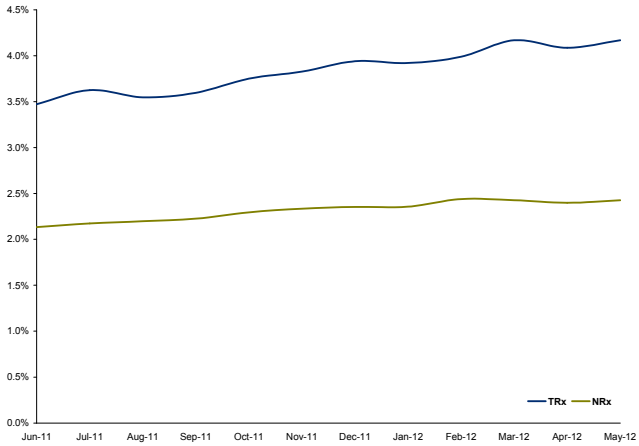
Source: Citi Research

Figure 2. Intuniv TRx and NRx growth



Source: Citi Research, IMS

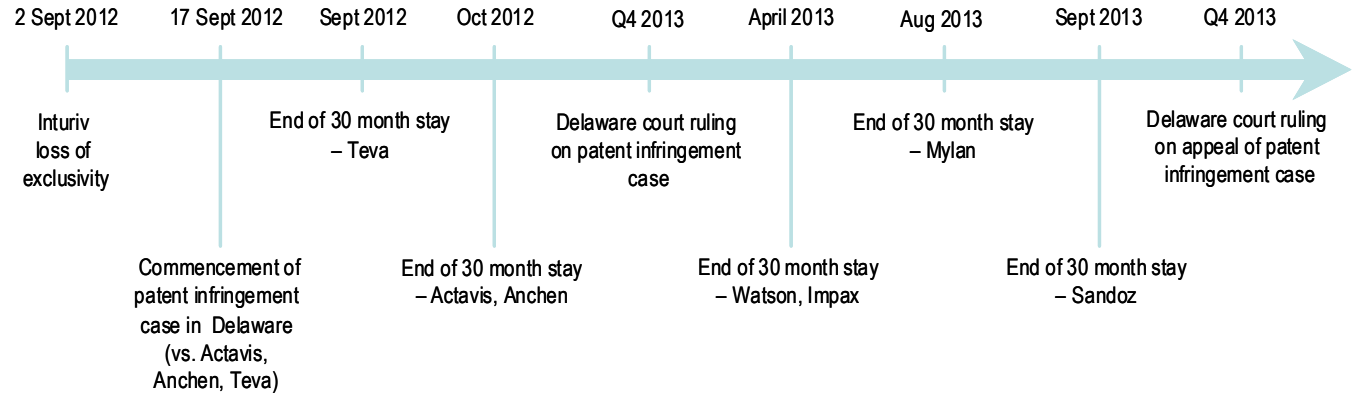
Figure 3. Intuniv TRx and NRx share of US ADHD market



Source: Citi Research, IMS

Background – Intuniv patent litigation: Intuniv is the third largest drug in Shire's ADHD portfolio, generating c.$220mn in revenues in 2011 (c.6% of group product sales). The drug loses marketing exclusivity on September 2nd, 2012, and has two Orange Book Patents protecting the product (which extend to 2020 and 2022). An additional Orange Book patent has recently been rendered irrelevant / unenforceable following Shire's dedication of this patent to the public. Seven generic companies have challenged the Orange Book patents, with the 30-month stays of the first round of generic challengers (Actavis, Anchen, Teva) due to expire in September-October 2012. Shire is suing the generic challengers, with the court case against Actavis, Anchen and Teva scheduled to commence on September 17th, 2012. Actavis has first-to-file status on the generic version of the compound. Assuming Shire does not manage to settle with the generic challengers, we anticipate generics to enter the market within 12-18 months (following the court's verdict and a possible appeal process). We do not anticipate that the generics companies will launch at risk (i.e. at the end of their 30-month stays, prior to the court's ruling).

Figure 4. Intuniv litigation timeline



Source: Citi Research, Company data, FDA Orange Book

Shire Unlikely to Win Court Case

Our legal due diligence supports non-infringement ruling on Intuniv Orange Book patents, if the case proceeds to trial

Delaware court likely to rule that generic challengers do not infringe Shire's Intuniv patents. Legal due diligence leads us to believe that the Court will likely rule that the generic challengers do not infringe Shire's Intuniv patents. The generics companies have filed paragraph IV ANDAs against all 3 Orange Book patents: the '290, '599 and '794 patents.

(1) '290 patent (September 21, 2015)

Shire's '290 patent was dedicated to the public in April 2012, effectively rendering it irrelevant/unenforceable.

(2) '599 patent (December 20, 2020)

There are two mutually exclusive arguments that favour the generic companies in challenging Shire's '599 patent:

(i) ***Invalidity*****:**
We note that the EU patent office has not yet approved Shire's Intuniv patents, on the grounds of additional prior art that wasn't raised in the examination of the equivalent US patent (which was approved by the USPTO in 2001). The EU Intuniv patent has been rejected by the European Patent Office multiple times. Following prior art rejections, we understand that Shire has recently narrowed the claims of the EU patent application. According to legal experts with whom we have spoken, if the same documents qualify as prior art with respect to the US patent claims, they could pose validity issues for Shire in the upcoming patent litigation trial. Different standards for applicable prior art apply in the US and EU.

(ii) ***Markman Hearing ruling on claim construction:***
The Intuniv '599 Orange Book patent is comprised of 3 components: guanfacine (the active agent), a pH dependent agent, and a non-pH dependent agent. Shire's case for patent infringement is based on the argument that *a single ingredient in a product can have multiple functions within the meaning of the claim*; however Judge Andrews in Delaware (where the litigation involving the first round of generic challengers is taking place) construed this claim in favour of the generic companies, maintaining the three-part definition of the compound. Based on the generic companies' arguments to uphold the 3-part definition of the compound, we can assume that they have developed a generic alternative to either the pH or non-pH dependent agents (but not both). Shire subsequently appealed the Court's ruling on the construction of this claim, however the appeal was recently lost and Judge Andrews on June 20th 2012 upheld his original ruling on the construction of the claim. We note that this claim construction was recently reiterated by Judge Seeborg in California, where the Markman hearing pertaining to the second round of litigation (Impax, Watson) was recently held (ruling on June 1st 2012). Due diligence with legal experts leads us to believe that, notwithstanding the question regarding the validity of the '599 patent (as discussed in (i) above), the Court's ruling on the claim above favours the generic challengers in the upcoming trial.

(3) '794 patent (July 4, 2022)

According to legal experts, the formulation claims of the '794 Intuniv patent are narrow, as they are directed to specific formulations (the patent is comprised of the active agent and 9 additional components. Consequently, it is sufficient for the generic challengers to provide just one generic alternative to any of the 10 components of the compound in order to claim non-infringement. While the goal of the patent was likely to protect Shire's commercial formulation, the generics challengers will likely be able to design around this by using other excipients while maintaining bioequivalence.

Background: what is a Markman Hearing? A Markman Hearing is a pretrial hearing in a US District Court during which a judge examines evidence from all parties on the meanings of relevant key words used in a patent claim, when patent infringement is alleged by a plaintiff. It is also known as a "Claim Construction Hearing". Markman hearings are important, since the court determines patent infringement cases by the interpretation of claims. A Markman hearing may encourage settlement, since the judge's claim construction can indicate a likely outcome for the patent infringement case as a whole.

Multisource generics a possibility even if Shire/Actavis settle

Anchen has filed a motion with the court to trigger Actavis' FTF 180 day exclusivity even if Shire/Actavis settle, likely forcing Shire to reach a multi-party settlement with all the generic challengers in the near term. Despite the fact that Actavis was the first generic company to file an ANDA against Intuniv, we believe that multi-party generic competition is possible even if Shire settles with the first filer. Anchen is attempting to utilize a legal mechanism of triggering Actavis' FTF 180 day exclusivity, irrespective of whether Shire/Actavis settle, thereby preventing a delay in Actavis' generic launch from delaying the entry of subsequent generic entrants to the market.

We understand that Anchen has recently filed a *motion for judgement on the pleading* on Shire's first Intuniv patent (the '290 patent), which was "dedicated to the public" earlier this year (i.e. rendered irrelevant for the purposes of the patent infringement case). Anchen is requesting that the Court officially render this patent legally invalid. As a matter of legal procedure, Anchen requires a court order on all three Intuniv patents in order to trigger Actavis' first filer exclusivity, thus if Anchen wins its patent infringement case on the remaining two Orange Book patents (the '599 and '794 patents), a court order determining invalidity of the '290 patent would enable Anchen to trigger Actavis' first-to-file 180 day exclusivity even if Actavis and Shire reach a settlement. Our legal due diligence indicates that the Judge is likely to rule in favour of Anchen on this motion. Oral arguments on this motion are scheduled to be heard by the Court next week.

Consequently, we do not view a potential settlement with Shire and Actavis as constituting a sufficient barrier to entry for multisource Intuniv generic competition. If Anchen wins its motion, Shire will be required to either (a) reach an agreement with the subsequent generic filers in order to prevent multisource generic competition, or (b) risk multisource generic Intuniv 181 days after the generic challengers win their respective non-infringement cases (likely mid to end

2014). This increases the complexity for Shire, as the company will likely be required to reach multi-party settlement agreements with all the generic challengers involved in the near term in order to protect its franchise.

Generic launch at risk unlikely

Assuming their ANDAs receive FDA approval, the generic companies will theoretically be able to launch generics upon expiration of their 30-month stays (October 2012 for Actavis, Anchen and Teva). However, the likelihood of a court verdict on the patent litigation by October 2012 is highly unlikely (the trial only commences in mid-September), implying that any generic launch would be “at risk” of up to triple damages should the judge ultimately rule in favour of patent infringement. We view a launch at risk by the generic companies as an unlikely scenario, and view the earliest potential date for multisource generics as early 2014 (following a court verdict on appeal).

Vyvanse and Lialda: Near-term Generic Competition Unlikely

Vyvanse protected by robust patent estate; Lialda legal proceedings suspended

In addition to Intuniv, Shire is also facing patent litigation on key products Vyanse (ADHD – c.$800mn sales in 2011) and Lialda (maintenance of remission of ulcerative colitis – c.$370mn sales in 2011). Based on our legal due diligence, we believe that the probability of near-term generics for either of these two products is low, for the reasons outlined below.

Vyvanse: Robust Patent Estate

No generic company has FTF status — Six generic filers have filed para IV ANDAs against Vyvanse (Actavis, Amneal, Mylan, Roxane, Sandoz and Watson). No company has FTF status, and the 30-month stays expire in August 2013.

Shire likely to file Citizen Petition with FDA — Given the robust patent estate surrounding Vyvanse, the generic companies are likely to try and "carve out" some of the information protected by certain of the patents, in order to obtain a generic approval of the branded product. In light of this, we anticipate that Shire will file a Citizen Petition with the FDA to in prevent the generic companies from "carving out" any of the information included in the Vyvanse patents, claiming that this would render the generic version of the drug less efficacious and/or safe than the branded product.

Figure 5. Shire's Vyvanse patent estate is robust, with 18 Orange Book patents listed

Patent	Expiry date	Patent type
486	29-Jun-23	Method of treatment for ADHD using l-lys
735	29-Jun-23	Composition of prodrug
630	24-Feb-23	Dumesylate salt compound
253	24-Feb-23	Crystalline patent
254	24-Feb-23	Method of treatment for adults with ADHD
787	24-Feb-23	Isolated l-lys compound
788	24-Feb-23	Method of decreasing abuse
30	24-Feb-23	PK composition
31	28-Feb-23	Method of administering
774	18-Mar-23	PK composition
770	25-Mar-23	Method of treatment for kids with ADHD aged 6-12
771	24-Feb-23	PK composition
466	08-Apr-23	L-lys + additive composition
467	29-Jun-23	PK composition
561	24-Feb-23	Fixed dose form
936	24-Feb-23	Method of steady state in serum
619	24-Feb-23	PK composition
305	24-Feb-23	PK composition

Source: Citi Research, FDA Orange Book

Lialda

The upcoming patent litigation case involving Shire and the first generic filer, Zydus Cadila (due to commence on October 8th 2012) will likely be delayed, due to procedural problems with the case. As a result, legal proceedings have been suspended, as the Judge has vacated all the documents from the case. It is unclear when legal proceedings will resume. Zydus Cadila's 30-month stay expires in November 2012. There is one Orange Book patent that extends to 2020 (a finished dosage form patent), and the Use Code exclusivity expires in July 2014.

Osmotica, Watson and Mylan have also filed ANDAs against Lialda, however their respective 30-month stays only expire in August – September 2014. We note the high variability of the compound, and the likely difficulty that the generic manufacturers will face in demonstrating bioequivalency to the originator product.

Figure 6. Shire annual sales model: 2011A – 2017E

USD mlns	**2011A**	**2012E**	**2013E**	**2014E**	**2015E**	**2016E**	**2017E**	**2018E**
Specialty Pharmaceuticals								
ADHD								
Vyvanse	805	1,002	1,152	1,325	1,458	1,531	1,607	1,687
Adderall XR	533	450	225	135	101	91	91	91
Intuniv	223	310	387	465	372	74	67	60
Equasym	20	23	24	26	27	28	28	28
Daytrana	-	-	-	-	-	-	-	-
Total ADHD	1,581	1,785	1,789	1,951	1,958	1,724	1,793	1,867
GI								
Lialda/Mezavant	372	404	464	534	587	616	616	616
Pentasa	251	253	253	240	228	228	228	228
Resolor	6	8	17	40	44	46	49	51
Total GI	630	665	734	814	859	891	893	895
General products								
Fosrenol	167	156	149	149	149	149	149	149
Xagrid	91	90	85	81	81	81	81	81
Carbatrol	52	22	16	14	13	12	12	12
Other products	96	101	96	92	87	83	79	75
Total general products	405	370	346	335	329	324	320	316
Pipeline		-	14	68	194	380	572	699
Total specialty pharmaceuticals	**2,616**	**2,819**	**2,882**	**3,167**	**3,340**	**3,319**	**3,579**	**3,778**
Human Genetic Therapies								
Elaprase	465	529	581	622	653	686	720	756
Replagal	475	541	584	614	644	677	710	746
VPRIV	256	301	340	374	393	412	433	455
Firazyr	33	92	110	138	151	159	167	175
Pipeline		-	7	27	67	118	160	181
Total HGT	**1,229**	**1,462**	**1,623**	**1,775**	**1,908**	**2,051**	**2,190**	**2,313**
Regenerative Medicine								
Dermagraft	105	242	278	320	352	387	406	427
Pipeline		-	-	-	-	-	-	-
Total regenerative medicine	**105**	**242**	**278**	**320**	**352**	**387**	**406**	**427**
Total product sales	**3,950**	**4,523**	**4,783**	**5,261**	**5,600**	**5,758**	**6,175**	**6,517**
Royalties								
3TC and Zeffix	83	44	36	32	29	29	29	29
Adderall XR	107	70	35	28	25	25	25	25
Other	94	90	90	90	90	90	90	90
Total royalties	**284**	**205**	**161**	**150**	**144**	**144**	**144**	**144**
Other revenues	30	24	24	24	24	24	24	24
Total Sales	**4,263**	**4,752**	**4,967**	**5,435**	**5,768**	**5,925**	**6,343**	**6,684**
YOY Growth	*22.8%*	*11.5%*	*4.5%*	*9.4%*	*6.1%*	*2.7%*	*7.0%*	*5.4%*

Source: Company reports and Citi Research

Figure 7. Shire annual P&L statement: 2011A – 2017E

$ mlns except per share data	**2011A**	**2012E**	**2013E**	**2014E**	**2015E**	**2016E**	**2017E**
Total Sales	**4,263**	**4,752**	**4,967**	**5,435**	**5,768**	**5,925**	**6,343**
YoY growth	*22.8%*	*11.5%*	*4.5%*	*9.4%*	*6.1%*	*2.7%*	*7.0%*
COGS	(532)	(648)	(658)	(719)	(745)	(762)	(817)
% of Sales	*12.5%*	*13.6%*	*13.2%*	*13.2%*	*12.9%*	*12.9%*	*12.9%*
Gross Profit	3,731	4,104	4,310	4,716	5,023	5,163	5,526
Gross Margin	*87.5%*	*86.4%*	*86.8%*	*86.8%*	*87.1%*	*87.1%*	*87.1%*
SG&A	(1,523)	(1,705)	(1,698)	(1,832)	(1,891)	(1,889)	(2,006)
% of Sales	*35.7%*	*35.9%*	*34.2%*	*33.7%*	*32.8%*	*31.9%*	*31.6%*
R&D	(730)	(807)	(852)	(895)	(936)	(952)	(1,020)
% of Sales	*17.1%*	*17.0%*	*17.2%*	*16.5%*	*16.2%*	*16.1%*	*16.1%*
EBITDA	1,478	1,592	1,760	1,989	2,196	2,323	2,500
EBITDA margin	*34.7%*	*33.5%*	*35.4%*	*36.6%*	*38.1%*	*39.2%*	*39.4%*
Depreciation	(122)	(106)	(113)	(124)	(135)	(146)	(157)
Operating income	**1,357**	**1,486**	**1,647**	**1,864**	**2,060**	**2,176**	**2,343**
Operating Margin	*31.8%*	*31.3%*	*33.1%*	*34.3%*	*35.7%*	*36.7%*	*36.9%*
Interest Income	2	5	10	12	16	23	30
Interest expense	(39)	(30)	(30)	(15)	-	-	-
Other income, net	(3)	2	2	2	2	2	2
Income before taxes	1,317	1,463	1,628	1,863	2,078	2,201	2,375
Tax	(292)	(300)	(329)	(373)	(405)	(429)	(463)
Non GAAP Tax Rate	22.2%	20.5%	20.2%	20.0%	19.5%	19.5%	19.5%
Equity income	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Loss from discontinued operations	-	-	-	-	-	-	-
Minority Interests	-	-	-	-	-	-	-
Net income attributable to Shire	1,028	1,165	1,301	1,493	1,676	1,774	1,914
Impact of convertible debt, net	34	34	34	34	-	-	-
Numerator for diluted EPS	1,061	1,199	1,335	1,527	1,676	1,774	1,914
Shares Outstanding (basic)	551	594	594	594	594	594	594
Shares Outstanding (diluted)	595	595	595	605	605	605	605
Non GAAP EPS	178.2	201.3	224.2	252.2	276.8	293.1	316.3
Non GAAP EPS per ADS	**534.6**	**604.0**	**672.7**	**756.7**	**830.4**	**879.3**	**948.8**
	26.5%	*13.0%*	*11.4%*	*12.5%*	*9.7%*	*5.9%*	*7.9%*

Source: Company reports and Citi Research

Figure 8. Shire annual balance sheet: 2011A – 2017E

$ mlns	**2011A**	**2012e**	**2013e**	**2014e**	**2015e**	**2016e**	**2017e**
Cash and cash equivalents	620	1,548	2,679	2,818	4,285	5,893	7,577
Restricted cash	21	21	21	21	21	21	21
Marketable securities	-	-	-	-	-	-	-
Accounts receivable	845	942	985	1,077	1,143	1,174	1,257
Inventories	340	407	413	448	463	473	505
Deferred tax asset	208	208	208	208	208	208	208
Prepaid expenses and other assets	175	175	175	175	175	175	175
Total Current Assets	2,208	3,300	4,479	4,747	6,295	7,944	9,742
Investments in Associates	20	20	20	20	20	20	20
Other Investments	10	10	10	10	10	10	10
PPE	933	927	963	989	1,004	1,008	1,000
Goodwill	592	592	592	592	592	592	592
Other Intangibles	2,493	2,359	2,221	2,077	1,929	1,775	1,616
Deferred tax asset	51	51	51	51	51	51	51
Other non current assets	74	74	74	74	74	74	74
Long term assets from discontinued operations	-	-	-	-	-	-	-
Total Long Term Assets	4,172	4,032	3,930	3,812	3,678	3,529	3,363
TOTAL ASSETS	**6,380**	**7,332**	**8,408**	**8,559**	**9,973**	**11,472**	**13,105**
Current Installments of long-term debt	1,100	1,100	1,100	-	-	-	-
Trade Accounts Payable	117	130	136	149	158	163	174
Other Payables	1,254	1,291	1,330	1,370	1,411	1,453	1,497
Other current liabilities	64	64	64	64	64	64	64
Current Liabilities from discontinued operations	-	-	-	-	-	-	-
Total Current Liabilities	2,534	2,585	2,630	1,583	1,633	1,680	1,735
Long-term debt	-	-	-	-	-	-	-
Deferred Tax Liability	517	532	548	565	581	599	617
Other long-term liabilities	144	149	153	158	162	167	172
Total Long Term Liabilities	661	681	701	722	744	766	789
TOTAL LIABILITIES	**3,195**	**3,266**	**3,331**	**2,305**	**2,377**	**2,446**	**2,524**
Common stock	56	56	56	56	56	56	56
Additional Paid-in capital	2,566	2,566	2,566	2,566	2,566	2,566	2,566
Accumulated other comprehensive losses	60	60	60	60	60	60	60
Retained earnings	503	1,384	2,395	3,572	4,914	6,344	7,899
Total Shareholders' Equity	3,185	4,066	5,077	6,254	7,596	9,026	10,581
TOTAL LIABILITIES & EQUITY	**6,380**	**7,332**	**8,408**	**8,559**	**9,973**	**11,472**	**13,105**

Source: Company reports and Citi Research

Figure 9. Shire annual cash flow statement: 2011A – 2017E

$ mlns	**2011A**	**2012e**	**2013e**	**2014e**	**2015e**	**2016e**	**2017e**
CASH FLOWS FROM OPERATING ACTIVITIES							
Net Income	865	975	1,134	1,326	1,508	1,607	1,747
Depreciation	295	106	113	124	135	146	157
Goodwill Amortization	-	-	-	-	-	-	-
Amortization of Other Intangibles		234	241	248	255	262	269
Change in deferred tax asset	(15)	15	16	16	17	17	18
Equity in (earnings) of equity method investees	(3)	-	-	-	-	-	-
Other cash flow	16	4	4	5	5	5	5
Changes in operating assets and liabilities:							
Change in accounts receivable	(134)	(97)	(43)	(93)	(66)	(31)	(83)
Change in inventory	(64)	(67)	(6)	(36)	(15)	(10)	(32)
Change in prepayments	(37)	-	-	-	-	-	-
Decrease in other assets	81						
Change in accounts payable	(10)	51	45	53	50	47	55
(Decrease)/increase in deferred revenue							
Dividends received from Equity Investees	5	-	-	-	-	-	-
Cash flows from operating activities	1,074	1,222	1,505	1,643	1,889	2,043	2,137
CASH FLOWS FROM INVESTING ACTIVITIES							
Purchase of subsidiary undertakings	(725)	-	-	-	-	-	-
Purchase of long term investments	(11)	-	-	-	-	-	-
Purchase of PPE	(194)	(100)	(150)	(150)	(150)	(150)	(150)
Purchase of intangible assets	(5)	(100)	(102)	(104)	(106)	(108)	(110)
Cash flows from investing activities	(809)	(200)	(252)	(254)	(256)	(258)	(260)
CASH FLOWS FROM FINANCING ACTIVITIES							
Payments on long term debt	(15)	-	-	(1,100)	-	-	-
Proceeds from exercise of options	13						
Repurchase of Common stock	(152)	-	-	-	-	-	-
Dividends Paid	(74)	(94)	(123)	(150)	(166)	(177)	(192)
Tax benefit of stock option compensation	31						
Cash flows from financing activities	(195)	(94)	(123)	(1,250)	(166)	(177)	(192)
FX effect	0.4	-	-	-	-	-	-
Net cash from discontinued businesses							
Change in cash and cash equivalents	**70**	**928**	**1,130**	**140**	**1,467**	**1,608**	**1,684**

Source: Company reports and Citi Research

Shire Pharmaceuticals

Company description

Shire is a specialty pharmaceutical company focusing on ADHD, GI disorders and an increasing presence in Orphan Drug Diseases post the acquisition of TKT in 2005.

Investment strategy

We rate Shire Buy. We model 2012e-2017e earnings CAGR of 9.5%. Our analysis suggests that the market underestimates: (i) the operating leverage associated with Shire's orphan drugs business, and (ii) the revenue opportunity for Vyvanse and Intuniv as the US ADHD market continues to benefit from increased penetration of the adult patient population group.

Valuation

Our £22.50 target price is based on a 2013e non-GAAP P/E multiple of 15.5x. We note that this multiple is at the lower end of the stock's valuation range over the past 5 years. A premium to the sector is justified, we believe, given the growth profile of the company. We model 2012e-2017e earnings CAGR of 9.5%. Our DCF-based intrinsic value of the stock is £27.5 and is based on a WACC of 8.3% and long-term growth rate of 1%, representing the long-term growth of HGT, partially offset by the patent expiries of the company's ADHD franchise. Consistent with the rest of the sector, strong cash flows drive a DCF valuation higher than our P/E valuation.

Risks

Key risks to our thesis and achievement of our target price include loss of Shire's Intuniv patent litigation, implying generic competition in 2013, loss of VPRIV and Replagal market share to Genzyme's competitor products, as well as the near-term possibility of a legal charge pertaining to the DoJ's ongoing investigation regarding Adderall XR.

Appendix A-1

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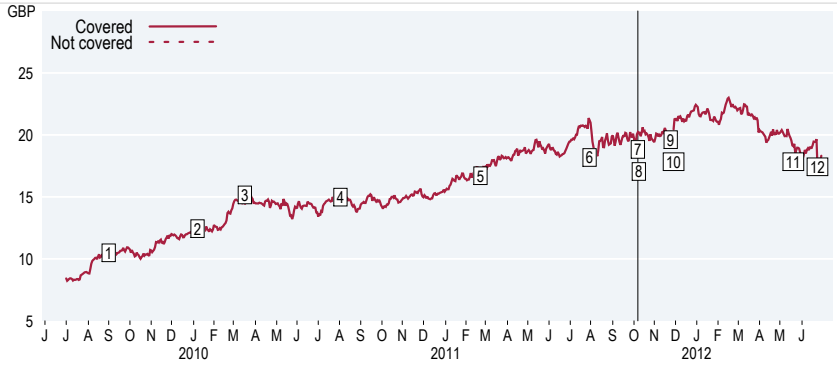
IMPORTANT DISCLOSURES

Shire Pharmaceuticals (SHP.L)

Ratings and Target Price History
Fundamental Research

Analyst: Liav Abraham
Covered since November 29 2011



	Date	Rating	Target Price	Closing Price
1	1-Sep-09	1M	*12.15	10.24
2	7-Jan-10	1M	*14.25	12.32
3	17-Mar-10	*3M	14.25	14.40
4	3-Aug-10	*2M	*16.15	14.73

	Date	Rating	Target Price	Closing Price
5	22-Feb-11	2M	*18.00	16.94
6	29-Jul-11	2M	*22.00	21.19
7	7-Oct-11	Stock rating system changed		
8	8-Oct-11	*2	22.00	20.23

	Date	Rating	Target Price	Closing Price
9	24-Nov-11	Coverage terminated		
10	29-Nov-11	*1	*24.00	20.45
11	21-May-12	1	*23.00	19.09
12	25-Jun-12	1	*22.50	17.43

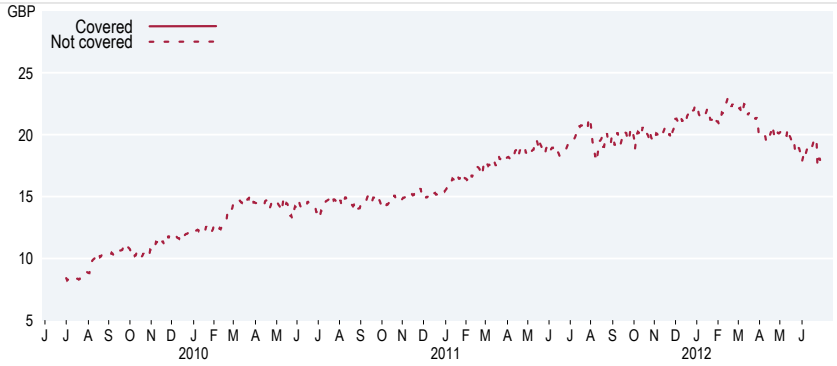
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Shire Pharmaceuticals (SHP.L)

Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: Liav Abraham
Covered since November 29 2011



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Rating/target price changes above reflect Eastern Standard Time

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