

# Desautels Capital Management

## Healthcare Pitch

Sector

*David Meyers, Senior Analyst*

*Vijay Somanchy, Senior Analyst*

*Thomas Boucher-Charest, Junior Analyst*

March 14, 2018

# Table of Contents

---

**I. Specialty Pharma Primer**

**II. Old Shire**

**III. Old Baxalta**

**IV. The Merger**

**V. The New Shire**

**VI. Investment Thesis**

**VII. Valuation**

# Specialty Pharma Primer

## SECTION I

# Specialty Pharma - Who Are They?

## The Main 8 Players

Company Name	Expertise	Revenue	Market Cap
<b>Perrigo</b>	Generics	<b>\$4,946m</b>	<b>\$12,187m</b>
<b>Mylan</b>	Generics	<b>\$11,907m</b>	<b>\$21,801m</b>
<b>Valeant</b>	Branded Pharma	<b>\$8,724</b>	<b>\$5,600</b>
<b>Shire</b>	Branded Pharma, Rare Diseases	<b>\$15,160m</b>	<b>\$39,914m</b>
<b>Allergan</b>	Branded Pharma	<b>\$15,940m</b>	<b>\$53,458m</b>
<b>Endo</b>	Generics	<b>\$3,468m</b>	<b>\$1,565m</b>
<b>Mallinckrodt</b>	Generics	<b>\$3,221m</b>	<b>\$1,379m</b>
<b>Teva</b>	Generics	<b>\$22,385m</b>	<b>\$20,992m</b>

Source: Bloomberg

# Specialty Pharma Index

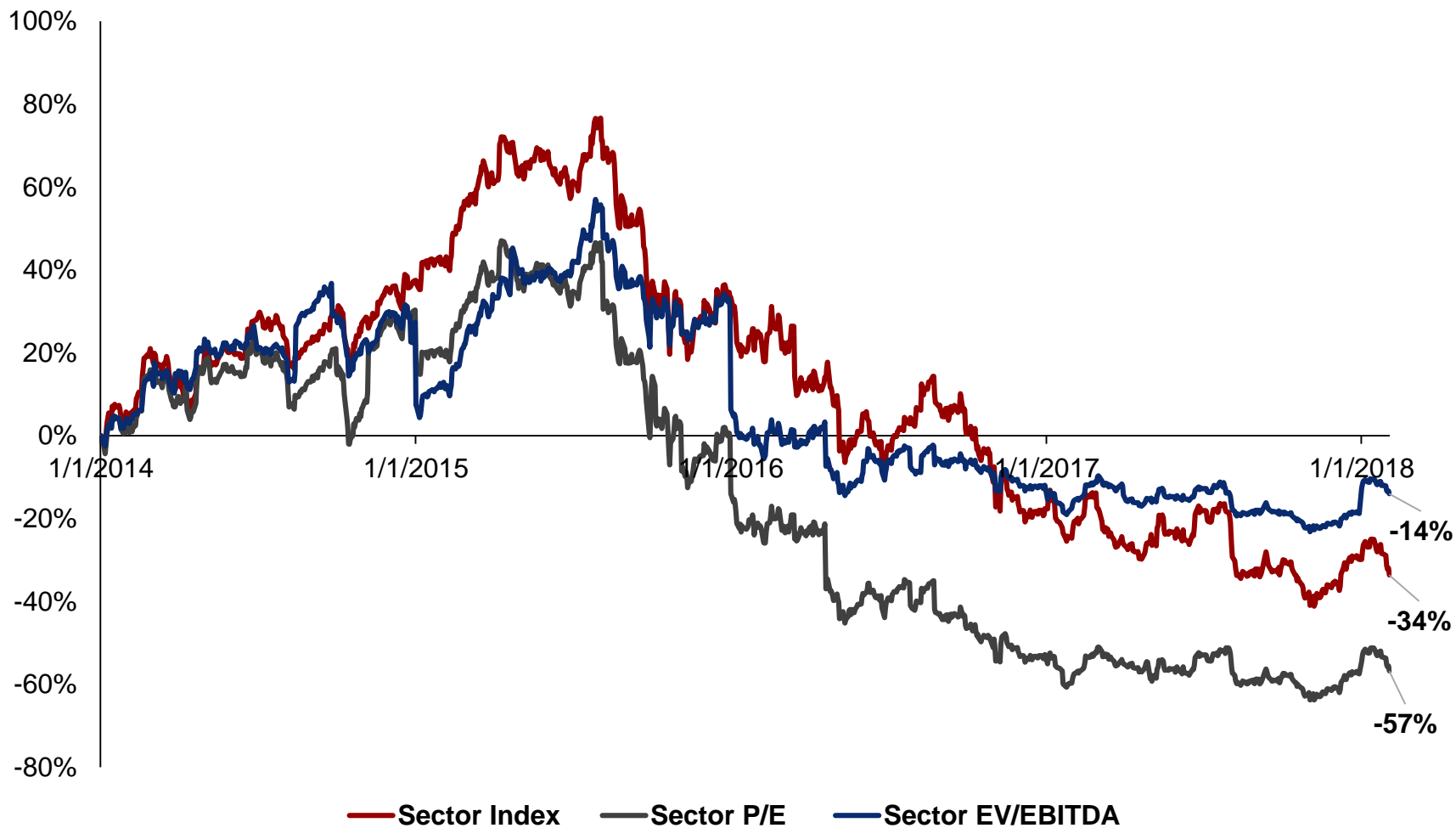
Doesn't Look Great



Source: Bloomberg

# Specialty Pharma Index

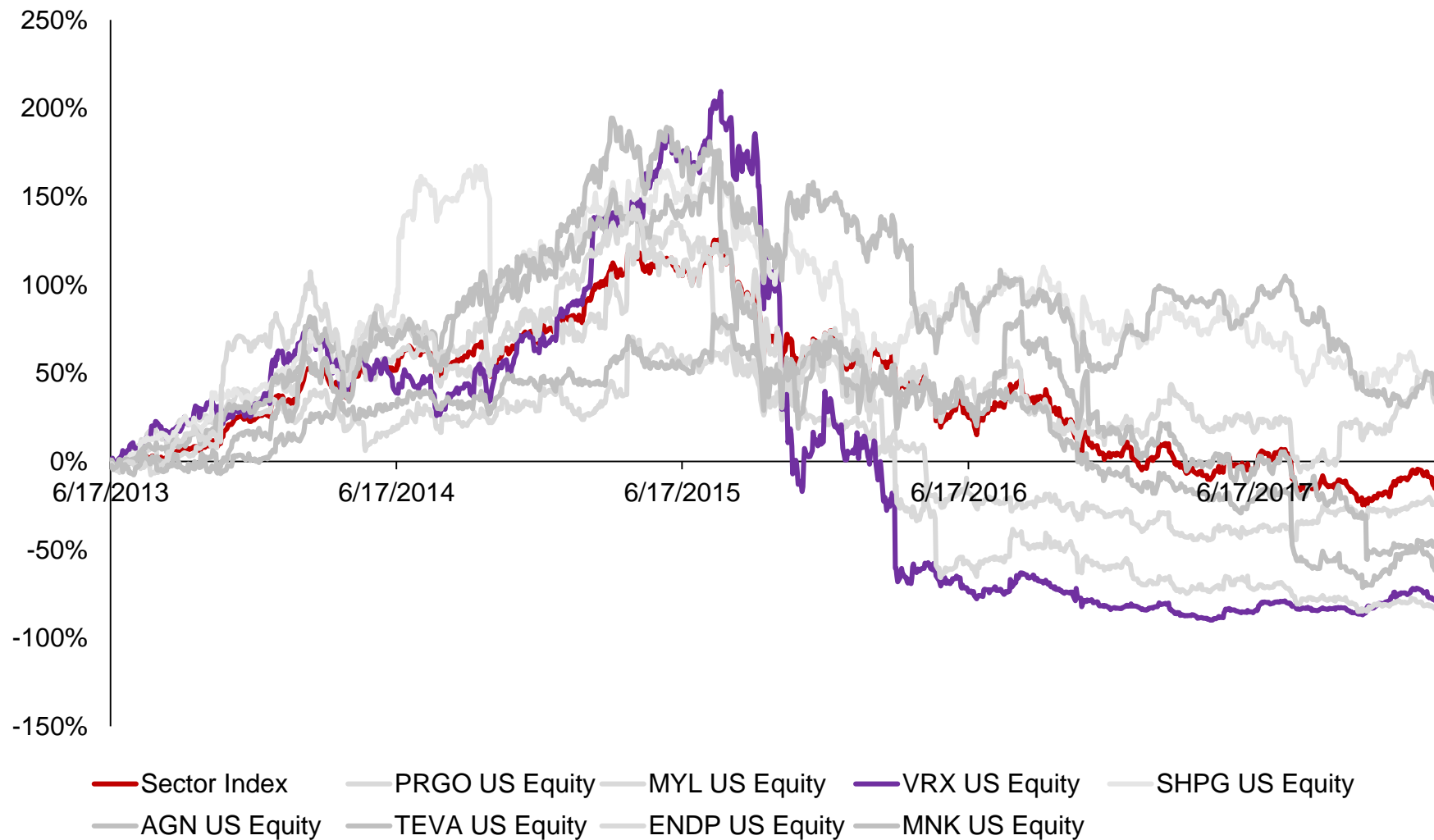
Doesn't Look Great



Source: Bloomberg

# Specialty Pharma Index + Its Composites

Doesn't Look Great



Source: Bloomberg

# Industry Data – The Story in Numbers

## How Has The Industry Changed?

Revenue	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	2,268	2,755	3,173	3,540	4,172	4,443	5,281
MYLAN NV	5,451	6,130	6,796	6,909	7,720	9,429	11,077
VALEANT PHARMACEUTICALS INTE	1,181	2,463	3,480	5,770	8,206	10,447	9,674
SHIRE PLC-ADR	3,471	4,263	4,681	4,934	6,022	6,417	11,397
ALLERGAN PLC	3,567	4,584	5,915	2,603	4,677	12,688	14,571
TEVA PHARMACEUTICAL-SP ADR	16,121	18,312	20,317	20,314	20,272	19,652	21,903
ENDO INTERNATIONAL PLC	1,716	2,525	2,816	2,125	2,381	3,269	4,010
MALLINCKRODT PLC	2,048	2,022	2,056	1,712	2,082	3,347	3,606
<b>Total</b>	<b>35,823</b>	<b>43,055</b>	<b>49,235</b>	<b>47,906</b>	<b>55,530</b>	<b>69,691</b>	<b>81,518</b>
<i>YoY Growth</i>		20.2%	14.4%	-2.7%	15.9%	25.5%	17.0%

Gross Profit	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	757	945	1,123	1,280	1,436	1,791	2,052
MYLAN NV	2,224	2,572	2,974	3,095	3,642	4,368	4,823
VALEANT PHARMACEUTICALS INTE	775	1,737	2,511	3,864	5,970	7,862	7,063
SHIRE PLC-ADR	3,038	3,687	4,036	4,264	5,043	5,455	7,590
ALLERGAN PLC	1,599	2,029	2,525	958	2,972	11,228	12,766
TEVA PHARMACEUTICAL-SP ADR	9,172	9,867	10,715	10,707	11,056	11,356	12,012
ENDO INTERNATIONAL PLC	1,218	1,577	1,681	1,238	1,149	1,484	1,553
MALLINCKRODT PLC	932	915	965	822	1,060	1,854	1,957
<b>Total</b>	<b>19,717</b>	<b>23,328</b>	<b>26,529</b>	<b>26,229</b>	<b>32,329</b>	<b>45,397</b>	<b>49,817</b>
<i>YoY Growth</i>		18.3%	13.7%	-1.1%	23.3%	40.4%	9.7%
<i>Margin</i>	55.0%	54.2%	53.9%	54.8%	58.2%	65.1%	61.1%

Source: Bloomberg



# Industry Data – The Story in Numbers (Cont'd)

## How Has The Industry Changed?

EBITDA	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	461	598	750	865	1,308	1,098	1,154
MYLAN NV	1,353	1,622	1,875	1,898	2,262	2,970	3,618
VALEANT PHARMACEUTICALS INTE	519	1,156	1,735	3,054	4,113	4,781	4,160
SHIRE PLC-ADR	1,149	1,475	1,565	2,032	2,652	2,893	3,556
ALLERGAN PLC	853	1,177	1,482	1,809	3,325	7,501	7,210
TEVA PHARMACEUTICAL-SP ADR	5,454	5,446	6,055	5,608	6,077	6,205	6,874
ENDO INTERNATIONAL PLC	651	850	930	771	820	1,360	1,641
MALLINCKRODT PLC	400	367	406	308	528	1,311	1,772
<b>Total</b>	<b>10,839</b>	<b>12,691</b>	<b>14,798</b>	<b>16,347</b>	<b>21,085</b>	<b>28,119</b>	<b>29,985</b>
<i>YoY Growth</i>		17.1%	16.6%	10.5%	29.0%	33.4%	6.6%
<i>Margin</i>	30.3%	29.5%	30.1%	34.1%	38.0%	40.3%	36.8%

Business seems fine, so why the underperformance?

# Industry Data – The Story in Numbers (Cont'd)

## How Has The Industry Changed?

Operating Income	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	336	490	569	679	622	367	(2,000)
MYLAN NV	722	1,005	1,109	1,136	1,353	1,461	702
VALEANT PHARMACEUTICALS INTE	(110)	300	80	(410)	2,001	1,527	(566)
SHIRE PLC-ADR	794	1,109	949	1,734	1,698	1,420	963
ALLERGAN PLC	305	536	321	(369)	(2,567)	(3,131)	(1,826)
TEVA PHARMACEUTICAL-SP ADR	3,871	3,109	2,205	1,649	3,951	3,352	2,154
ENDO INTERNATIONAL PLC	465	465	(540)	517	326	(933)	(3,472)
MALLINCKRODT PLC	240	241	235	74	(76)	462	308
<b>Total</b>	<b>6,624</b>	<b>7,256</b>	<b>4,929</b>	<b>5,009</b>	<b>7,308</b>	<b>4,524</b>	<b>(3,736)</b>
<i>YoY Growth</i>		9.5%	-32.1%	1.6%	45.9%	-38.1%	-182.6%
<i>Margin</i>	18.5%	16.9%	10.0%	10.5%	13.2%	6.5%	-4.6%

Abnormal Losses	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	51	5	45	31	147	410	5,330
MYLAN NV	208	106	235	294	482	606	1,513
VALEANT PHARMACEUTICALS INTE	418	259	695	1,507	211	646	1,860
SHIRE PLC-ADR	93	50	312	(26)	(1,109)	822	1,132
ALLERGAN PLC	240	194	554	1,151	2,972	4,636	2,405
TEVA PHARMACEUTICAL-SP ADR	606	1,268	2,142	2,427	618	1,545	3,196
ENDO INTERNATIONAL PLC	77	159	1,192	10	193	1,735	4,129
MALLINCKRODT PLC	45	6	39	95	328	177	426
<b>Total</b>	<b>1,739</b>	<b>2,048</b>	<b>5,214</b>	<b>5,489</b>	<b>3,842</b>	<b>10,577</b>	<b>19,991</b>
<i>YoY Growth</i>		17.8%	154.6%	5.3%	-30.0%	175.3%	89.0%
<i>% of Sales</i>	4.9%	4.8%	10.6%	11.5%	6.9%	15.2%	24.5%

Source: Bloomberg

# Industry Data – The Story in Numbers (Cont'd)

## How Has The Industry Changed?

Net Debt	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	1,234	583	767	1,194	1,186	5,614	5,175
MYLAN NV	4,270	4,433	4,748	7,739	6,425	6,138	14,541
VALEANT PHARMACEUTICALS INTE	3,193	6,481	10,088	16,767	14,906	30,491	29,304
SHIRE PLC-ADR	473	473	(396)	(2,239)	(2,132)	1,446	22,439
ALLERGAN PLC	722	809	6,105	8,721	15,280	41,425	19,543
TEVA PHARMACEUTICAL-SP ADR	4,135	12,836	11,730	10,717	8,058	3,011	34,810
ENDO INTERNATIONAL PLC	581	2,946	2,636	3,209	3,849	8,304	7,753
MALLINCKRODT PLC	-	12	10	644	3,187	6,131	5,810
<b>Total</b>	<b>14,608</b>	<b>28,571</b>	<b>35,688</b>	<b>46,752</b>	<b>50,758</b>	<b>102,560</b>	<b>139,375</b>
<i>YoY Growth</i>		95.6%	24.9%	31.0%	8.6%	102.1%	35.9%

Net Debt/EBITDA	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	2.68	0.97	1.02	1.38	0.91	5.11	4.48
MYLAN NV	3.16	2.73	2.53	4.08	2.84	2.07	4.02
VALEANT PHARMACEUTICALS INTE	6.16	5.60	5.81	5.49	3.62	6.38	7.04
SHIRE PLC-ADR	0.41	0.32	(0.25)	(1.10)	(0.80)	0.50	6.31
ALLERGAN PLC	0.85	0.69	4.12	4.82	4.60	5.52	2.71
TEVA PHARMACEUTICAL-SP ADR	0.76	2.36	1.94	1.91	1.33	0.49	5.06
ENDO INTERNATIONAL PLC	0.89	3.47	2.83	4.16	4.69	6.10	4.72
MALLINCKRODT PLC	-	0.03	0.03	2.09	6.04	4.68	3.28
<b>Total</b>	<b>1.35</b>	<b>2.25</b>	<b>2.41</b>	<b>2.86</b>	<b>2.41</b>	<b>3.65</b>	<b>4.65</b>
<i>YoY Growth</i>		67.0%	7.1%	18.6%	-15.8%	51.5%	27.4%

Source: Bloomberg

# Industry Data – The Story in Numbers (Cont'd)

## How Has The Industry Changed?

Acquisitions	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	869	(3)	582	852	161	2,886	427
MYLAN NV	563	81	-	1,262	50	693	6,482
VALEANT PHARMACEUTICALS INTE	85	2,464	6,971	5,254	1,103	15,457	19
SHIRE PLC-ADR	450	725	97	228	4,104	5,553	17,476
ALLERGAN PLC	68	575	5,743	15	5,562	37,510	1,199
TEVA PHARMACEUTICAL-SP ADR	4,951	6,561	-	-	-	3,309	36,148
ENDO INTERNATIONAL PLC	1,105	2,393	3	4	1,087	7,650	30
MALLINCKRODT PLC	-	-	-	88	2,794	2,155	587
<b>Total</b>	<b>8,089</b>	<b>12,796</b>	<b>13,396</b>	<b>7,702</b>	<b>14,861</b>	<b>75,215</b>	<b>62,369</b>
<i>YoY Growth</i>		58.2%	4.7%	-42.5%	92.9%	406.1%	-17.1%

Debt fueled acquisition spree, but it came at a cost...

# Industry Data – The Story in Numbers (Cont'd)

## How Has The Industry Changed?

Interest Expense	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	50	46	65	70	109	162	217
MYLAN NV	331	336	309	313	333	339	455
VALEANT PHARMACEUTICALS INTE	84	333	482	844	971	1,563	1,836
SHIRE PLC-ADR	35	39	38	38	31	42	470
ALLERGAN PLC	84	82	117	240	412	1,193	1,296
TEVA PHARMACEUTICAL-SP ADR	202	234	355	314	300	270	546
ENDO INTERNATIONAL PLC	48	149	183	175	231	379	456
MALLINCKRODT PLC	1	1	1	20	83	256	378
<b>Total</b>	<b>835</b>	<b>1,219</b>	<b>1,549</b>	<b>2,014</b>	<b>2,470</b>	<b>4,204</b>	<b>5,653</b>
<i>YoY Growth</i>		45.9%	27.1%	30.0%	22.6%	70.2%	34.5%
<i>% of Sales</i>	2.3%	2.8%	3.1%	4.2%	4.4%	6.0%	6.9%

R&D	2010	2011	2012	2013	2014	2015	2016
PERRIGO CO PLC	84	89	106	115	173	181	184
MYLAN NV	272	291	389	456	561	650	696
VALEANT PHARMACEUTICALS INTE	68	66	79	157	246	334	421
SHIRE PLC-ADR	662	755	894	914	763	906	1,431
ALLERGAN PLC	287	291	402	191	606	1,117	1,440
TEVA PHARMACEUTICAL-SP ADR	933	1,080	1,356	1,427	1,488	1,525	2,111
ENDO INTERNATIONAL PLC	145	180	219	97	113	102	183
MALLINCKRODT PLC	119	142	144	158	164	185	269
<b>Total</b>	<b>2,569</b>	<b>2,893</b>	<b>3,589</b>	<b>3,516</b>	<b>4,113</b>	<b>5,000</b>	<b>6,735</b>
<i>YoY Growth</i>		12.6%	24.1%	-2.1%	17.0%	21.6%	34.7%
<i>% of Sales</i>	7.2%	6.7%	7.3%	7.3%	7.4%	7.2%	8.3%

Source: Bloomberg

# Shire Stands Out – And for the Good Reasons

## Shire Looks Good Where it Matters

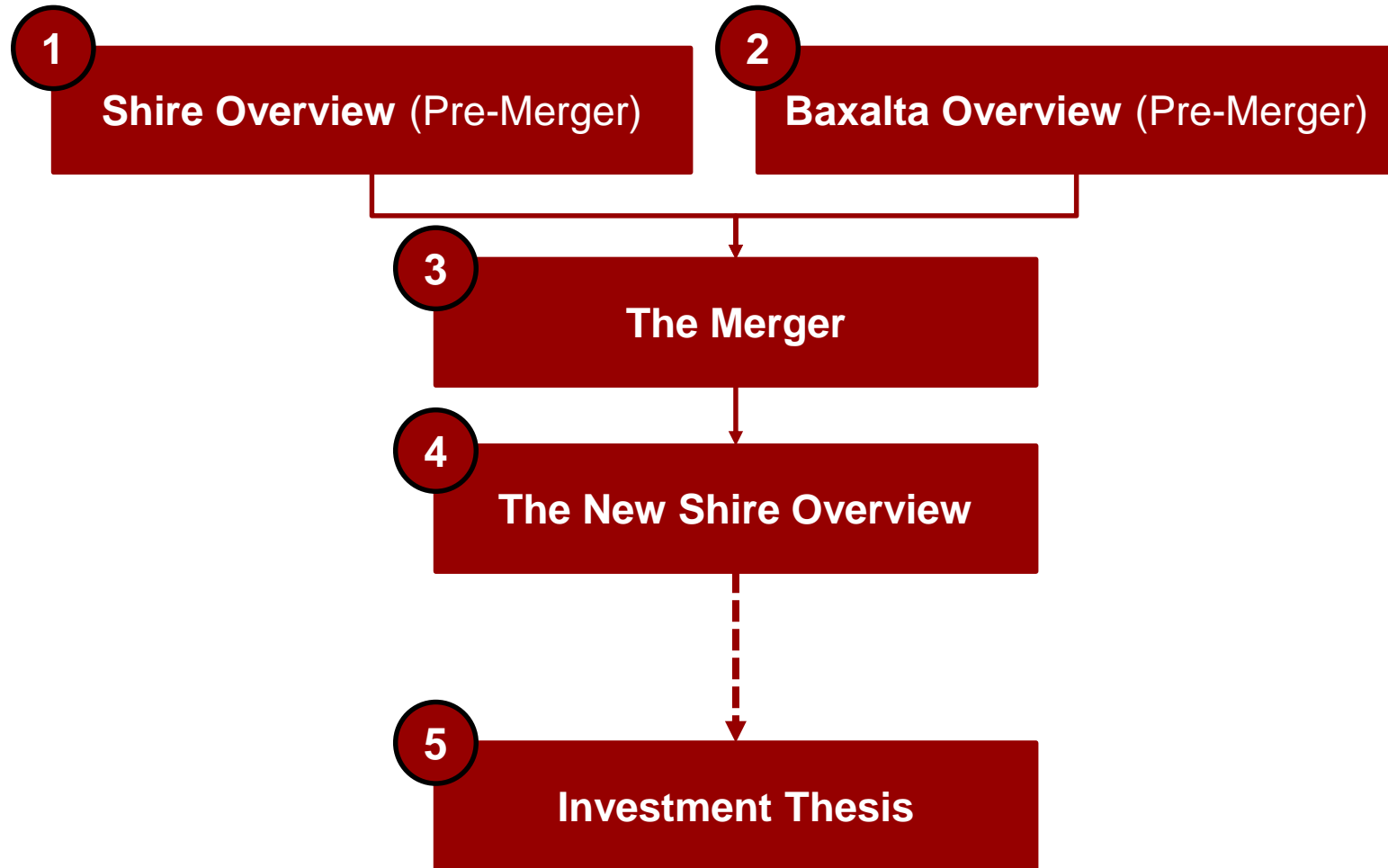
<b>Sales CAGR</b> 5YR AVG  <b>Shire: 21.9%</b> Peers: 13.8%	<b>Gross Margin</b>  <b>Shire: 67%</b> Peers: 60%	<b>NTM Multiples</b>			
		<b>Company Name</b>	<b>EV/EBITDA</b>	<b>EV/EBIT</b>	<b>P/E</b>
		Perrigo	12.8x	13.9x	16.4x
		Mylan	8.5x	9.3x	7.8x
		Valeant	9.6x	10.6x	5.1x
		Allergan	11.1x	11.4x	10.5x
		Teva	10.7x	12.3x	7.9x
		Endo	6.9x	8.4x	2.9x
		Mallinckrodt	5.9x	6.9x	2.5x
		<b>Peer Average</b>	<b>9.4x</b>	<b>10.4x</b>	<b>7.6x</b>
<b>Operating Margin</b>  <b>Shire: 8%</b> Peers: -7%	<b>R&amp;D-to-Sales</b> 5YR AVG  <b>Shire: 16%</b> Peers: 6%				
<b>Net Debt/EBITDA</b>  <b>Shire: 6.3x</b> Peers: 4.7x	<b>EBITDA Margin</b>  <b>Shire: 31%</b> Peers: 37%				
		Shire	8.8x	9.6x	8.6x
		<i>Discount</i>	6.4%	8.0%	-11.3%
<b>Shire appears to be trading at an unjustified discount</b>					

# The Pitch Framework



# The Pitch Framework

---





# The Old Shire (2016)

NYSE:SHPG

SECTION II

# Shire PLC. Company Overview

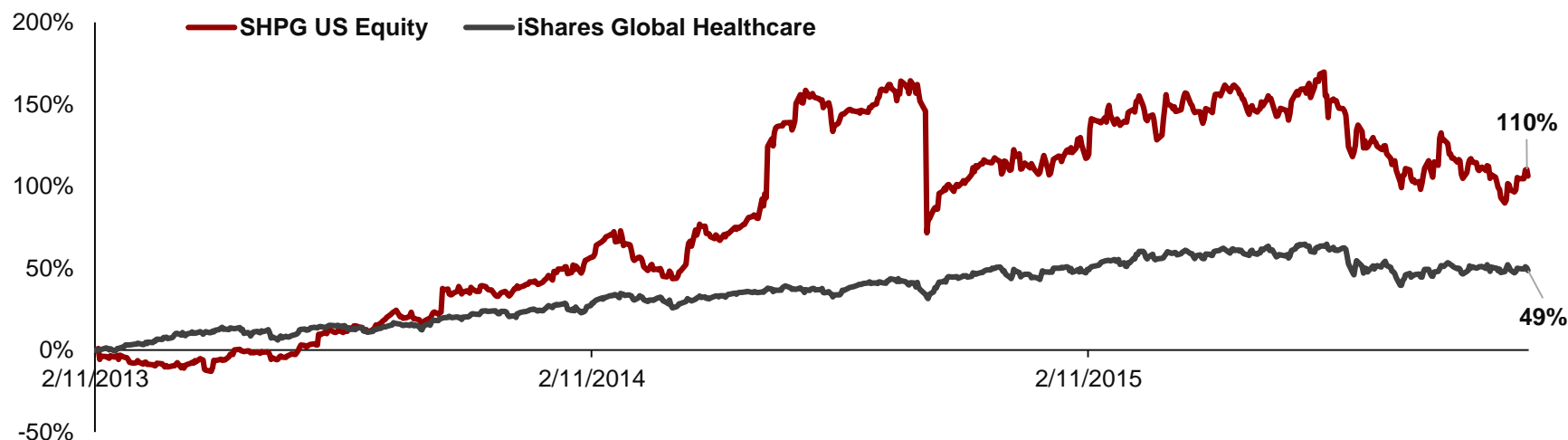


## A Snapshot of the Old Shire

### Company Overview

- Shire PLC is a leading biotech company, focusing on developing and marketing innovative medicines for patients with rare diseases and other select conditions
- The firm focuses mainly on **Neuroscience**, **Gastrointestinal** and **Internal Medicine**. More specifically, Shire targets conditions considered as “rare disease”
- Unlike some of its more noticeable competitors, Shire mainly operates with an internal R&D model as opposed to acquisition driven

	2011	2012	2013	2014	2015
<b>Revenue</b>	<b>4,263</b>	<b>4,681</b>	<b>4,934</b>	<b>6,022</b>	<b>6,417</b>
YoY Growth		9.8%	5.4%	22.0%	6.6%
<b>Gross Profit</b>	<b>3,687</b>	<b>4,036</b>	<b>4,264</b>	<b>5,043</b>	<b>5,455</b>
GM	86.5%	86.2%	86.4%	83.7%	85.0%
<b>EBITDA</b>	<b>1,475</b>	<b>1,565</b>	<b>2,032</b>	<b>2,652</b>	<b>2,893</b>
Margin	34.6%	33.4%	41.2%	44.0%	45.1%
<b>Net Income</b>	<b>905</b>	<b>972</b>	<b>1,363</b>	<b>2,449</b>	<b>1,953</b>
YoY Growth		7.4%	40.2%	79.7%	-20.3%
P/E	22.2x	22.8x	18.4x	12.6x	30.6x
EV/EBITDA	14.3x	13.4x	12.6x	19.1x	20.9x
Net Debt/EBITDA	-0.5x	-0.3x	-0.3x	-1.1x	-1.0x

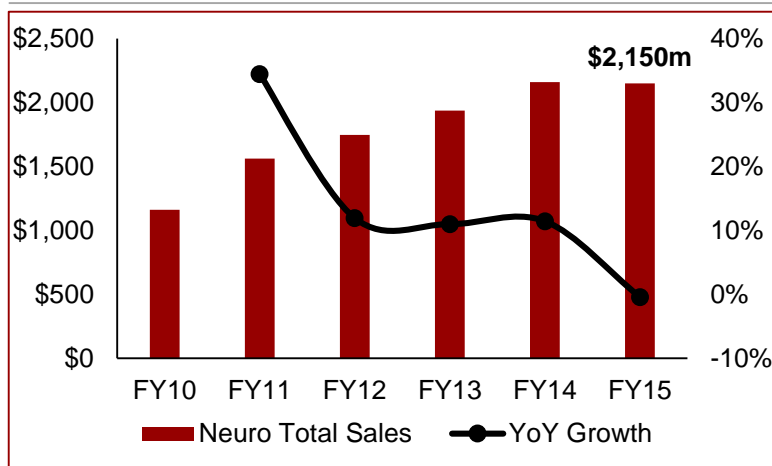


Source: Company Filings, Bloomberg

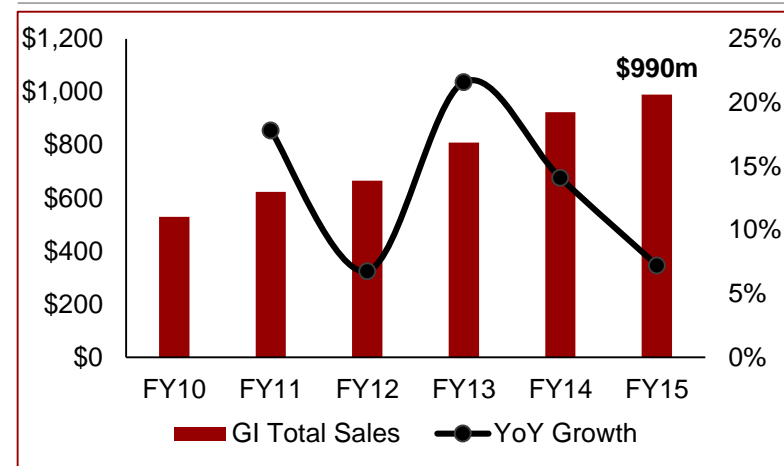
# Operating Segments

## Four Main Operating Segment

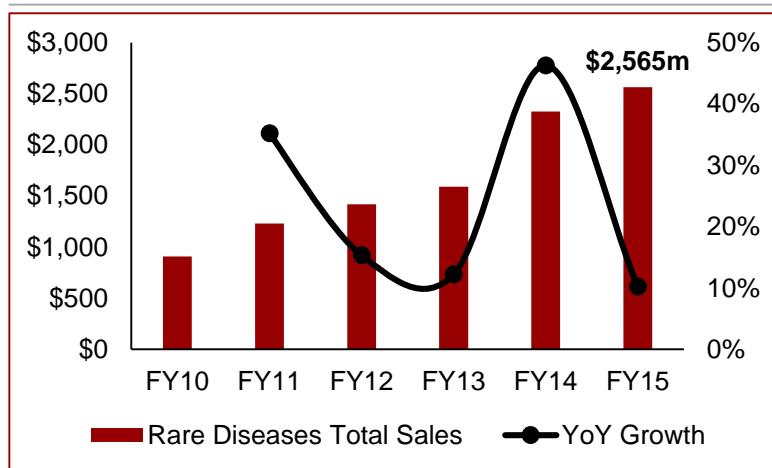
### Neuroscience



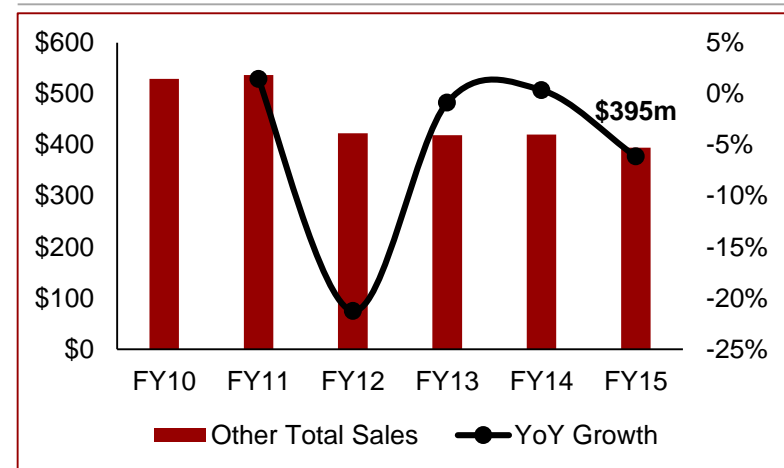
### Gastrointestinal



### Rare Diseases



### Other Revenues

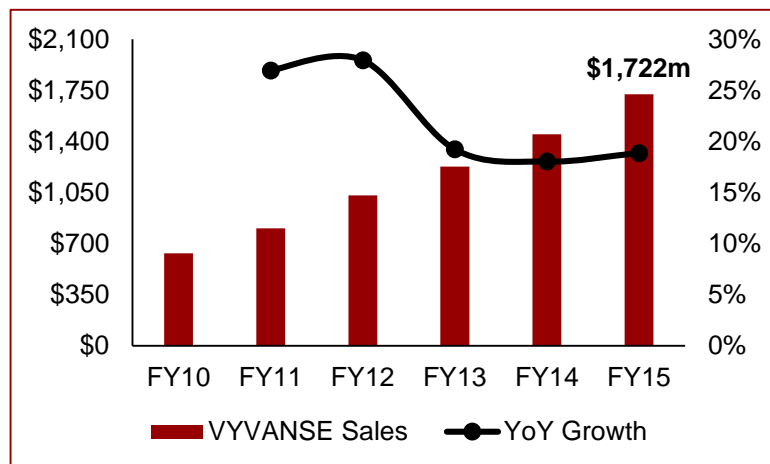


Source: Company Filings

# Operating Segments (Cont'd)

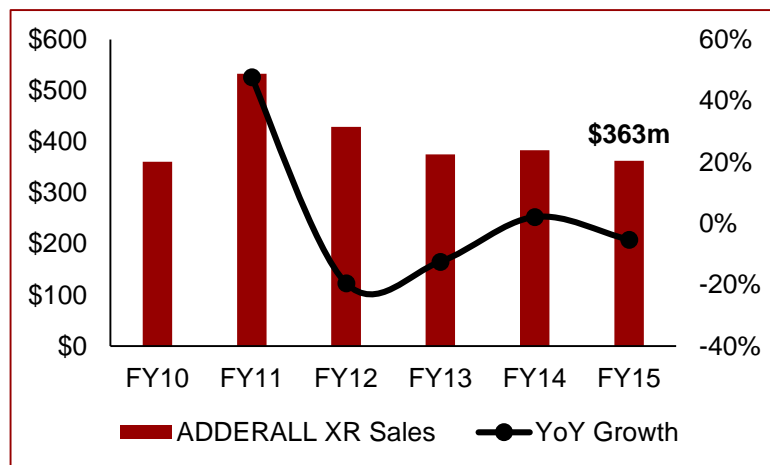
## Main Neuroscience Products

(in \$ millions, unless noted)



### Neuroscience – Vyvanse

- Vyvanse is a stimulant for the treatment of attention deficit hyperactivity disorder (ADHD).
- Vyvanse has been approved for treatment of ADHD for children (6-12 years old), adolescents (13-17 years old) and adults.
- Also approved for Binge Eating Disorder (BED)
- **ADHD Market Size of \$9.9bn by 2020, 5% CAGR**



### Neuroscience – Adderall

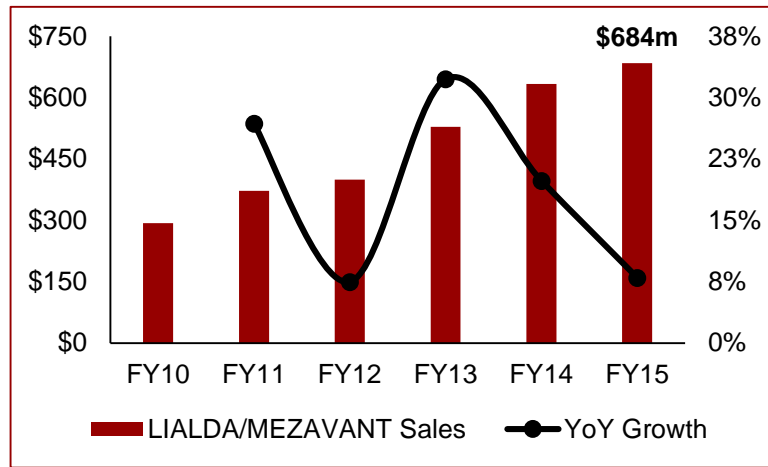
- Adderall is a stimulant for the treatment of attention deficit hyperactivity disorder (ADHD)
- Adderall has been approved for treatment of ADHD for children, adolescents and adults
- **ADHD Market Size of \$9.9bn by 2020, 5% CAGR**

Source: Company Filings, GBI Research

# Operating Segments (Cont'd)

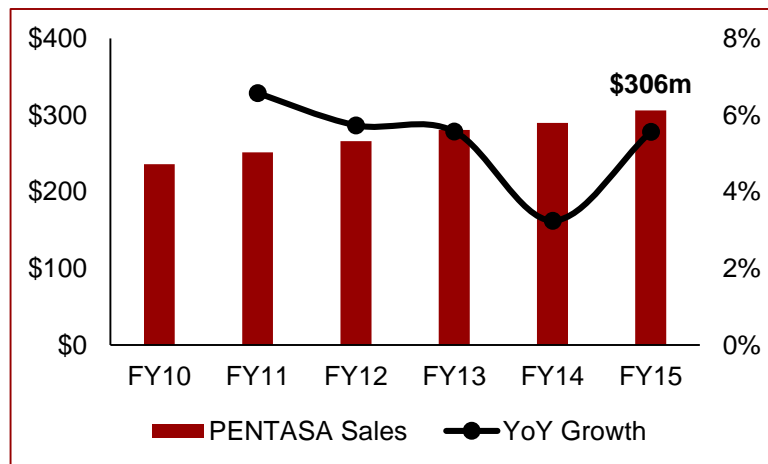
## Main Gastro Intestinal Products

(in \$ millions, unless noted)



### GI – Lialda/Mezavant

- Lialda (Mezavant in some regions outside the US) is used for the treatment of Ulcerative Colitis (UC).
- UC is a serious chronic inflammatory disease of the colon where part or all of the large intestine becomes inflamed and often ulcerated
- **UC Market Size of \$6.6bn by 2022**



### GI – Pentasa

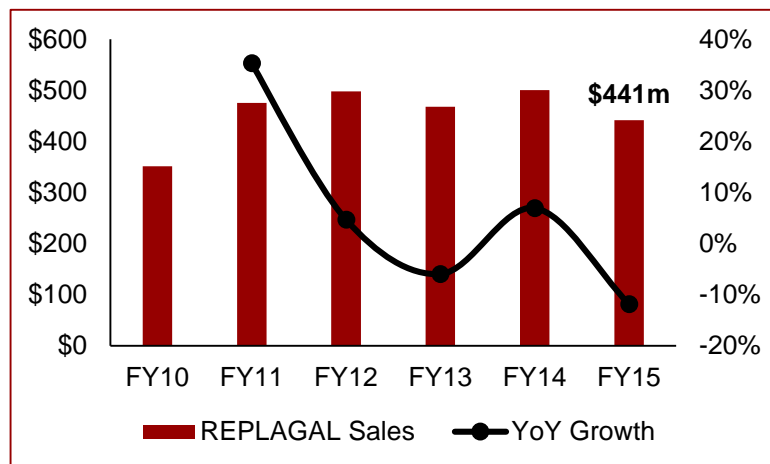
- Pentasa is used to treat Ulcerative Colitis (UC), only distributed in the US
- UC is a serious chronic inflammatory disease of the colon where part or all of the large intestine becomes inflamed and often ulcerated
- **UC Market Size of \$6.6bn by 2022**

Source: Company Filings

# Operating Segments (Cont'd)

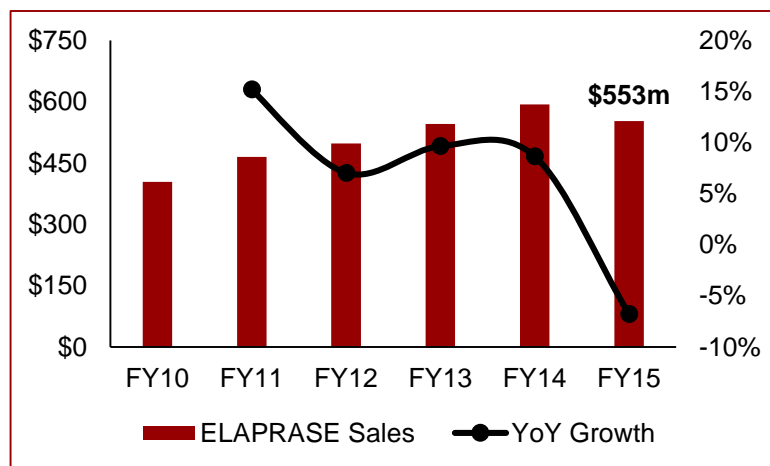
## Main Rare Disease Products

(in \$ millions, unless noted)



### Rare Disease – Replagal

- Replagal is an enzyme replacement marketed for the treatment of Fabry disease outside the US.
- Fabry disease is a rare, inherited genetic disorder resulting from a deficiency in the enzymes necessary to breakdown fats.
- Fabry Market Size currently around \$2bn**



### Rare Disease – Elaprase

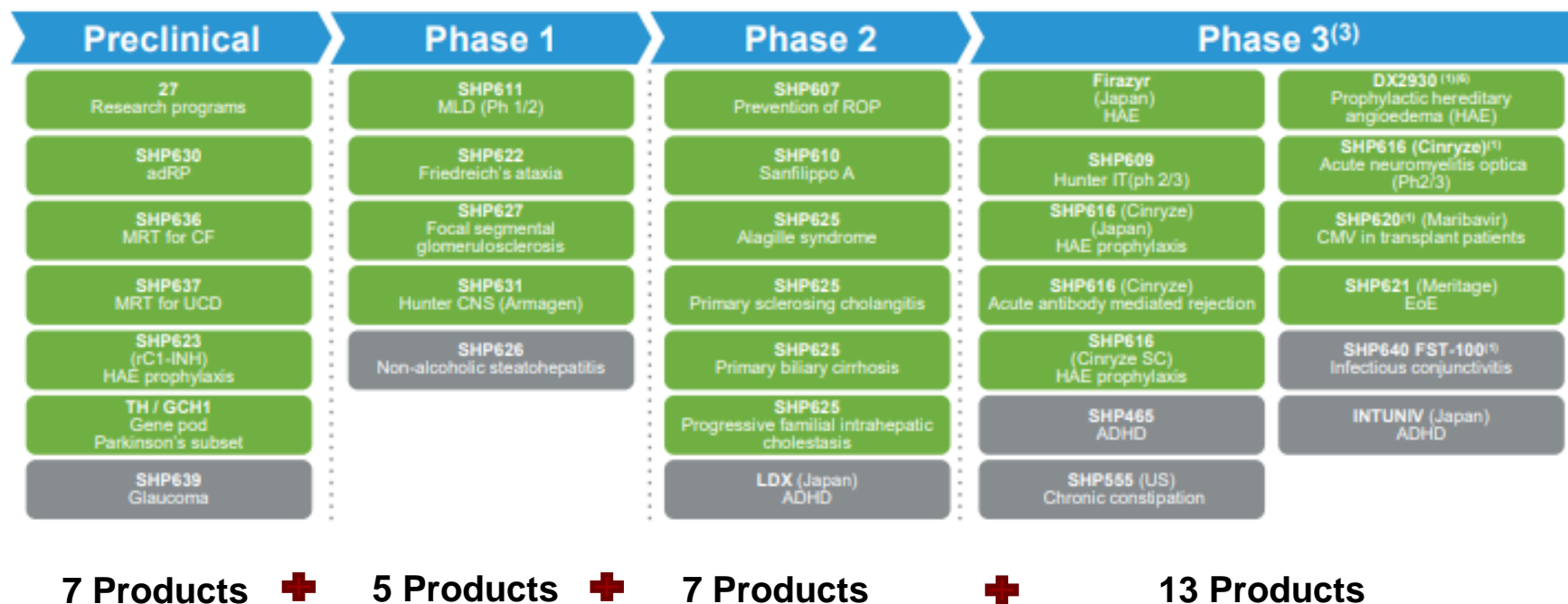
- Elaprase is an enzyme replacement treatment for Hunter syndrome.
- Hunter syndrome is a rare, inherited genetic disorder mainly affecting males that interferes with the body's ability to breakdown waste substances in cells.
- Hunter Syndrome Market Size <\$2bn**

Source: Company Filings

# Shire's 2016 Pipeline



Impressive pipeline, offsetting patent risk



32 products in development, 80% targeting rare diseases

# Company Financials – P&L



(in \$ millions, unless noted)

Income Statement	2011	2012	2013	2014	2015
Product Sales	3,845	4,253	4,758	5,830	6,100
Royalties	284	242	154	161	301
Other Revenues	30	33	23	31	16
<b>Total Revenue</b>	<b>4,158</b>	<b>4,528</b>	<b>4,934</b>	<b>6,022</b>	<b>6,417</b>
YoY Growth		8.9%	9.0%	22.0%	6.6%
<b>COGS</b>	<b>(552)</b>	<b>(586)</b>	<b>(671)</b>	<b>(979)</b>	<b>(969)</b>
<b>Gross Profit</b>	<b>3,606</b>	<b>3,942</b>	<b>4,264</b>	<b>5,043</b>	<b>5,448</b>
Margin	86.7%	87.1%	86.4%	83.7%	84.9%
<b>R&amp;D</b>	<b>(765)</b>	<b>(953)</b>	<b>(933)</b>	<b>(1,068)</b>	<b>(1,564)</b>
% of Product Sales	-19.9%	-22.4%	-19.6%	-18.3%	-25.6%
<b>SG&amp;A</b>	<b>(1,676)</b>	<b>(1,948)</b>	<b>(1,651)</b>	<b>(2,026)</b>	<b>(2,341)</b>
% of Sales	-40.3%	-43.0%	-33.5%	-33.6%	-36.5%
<b>Other</b>	<b>(30)</b>	<b>5</b>	<b>55</b>	<b>(252)</b>	<b>(123)</b>
<b>Total Operating Expenses</b>	<b>(2,471)</b>	<b>(2,896)</b>	<b>(2,530)</b>	<b>(3,345)</b>	<b>(4,028)</b>
<b>Operating Income</b>	<b>1,136</b>	<b>1,046</b>	<b>1,734</b>	<b>1,698</b>	<b>1,420</b>
Margin	27.3%	23.1%	35.1%	28.2%	22.1%
Financial Expense	(37)	(35)	(36)	(6)	(37)
Other	19	(2)	(4)	1,645	4
<b>Income Before Taxes</b>	<b>1,117</b>	<b>1,008</b>	<b>1,694</b>	<b>3,336</b>	<b>1,386</b>
<b>Taxes</b>	<b>(237)</b>	<b>(203)</b>	<b>(278)</b>	<b>(56)</b>	<b>(46)</b>
Tax Rate	-21.2%	-20.2%	-16.4%	-1.7%	-3.3%
Gain (Loss) from Disc. Oper.	(15)	(59)	(751)	125	(36)
<b>Net Income</b>	<b>865</b>	<b>745</b>	<b>665</b>	<b>3,406</b>	<b>1,303</b>

Solid top-line growth

Declining GM, but still very strong

Significant R&D investments,  
increase in R&D expense offset by  
improved G&A control

Volatile bottom-line from one-time  
items

Source: Company Filings



# Company Financials – Balance Sheet



(in \$ millions, unless noted)

Balance Sheet	2011	2012	2013	2014	2015
<b>Assets</b>					
<b>Current Assets</b>					
Cash & Cash Equivalents	641	1,499	2,262	3,037	222
Accounts Receivable	845	824	961	1,035	1,201
Inventories	340	437	455	545	635
Others	383	452	610	566	197
<b>Total Current Assets</b>	<b>2,208</b>	<b>3,212</b>	<b>4,288</b>	<b>5,183</b>	<b>2,256</b>
<b>Non-Current Assets</b>					
PPE	932	956	892	838	828
Goodwill	593	645	625	2,475	4,148
Intangibles	2,493	2,388	2,313	4,934	9,173
Other	154	117	206	202	205
<b>Total Non-Current Assets</b>	<b>4,172</b>	<b>4,105</b>	<b>4,035</b>	<b>8,449</b>	<b>14,354</b>
<b>Total Assets</b>	<b>6,380</b>	<b>7,317</b>	<b>8,323</b>	<b>13,632</b>	<b>16,610</b>
<b>Liabilities &amp; Equity</b>					
<b>Current Liabilities</b>					
Accounts Payable	1,371	1,502	1,688	1,909	2,051
Short-Term Debt	1,100	-	-	850	1,512
Other	64	144	120	263	144
<b>Total Current Liabilities</b>	<b>2,534</b>	<b>1,646</b>	<b>1,808</b>	<b>3,022</b>	<b>3,706</b>
<b>Non-Current Liabilities</b>					
Long-Term Debt	-	1,100	-	-	70
Others	661	762	1,149	1,947	3,005
<b>Total Non-Current Liabilities</b>	<b>661</b>	<b>1,862</b>	<b>1,149</b>	<b>1,947</b>	<b>3,075</b>
<b>Total Liabilities</b>	<b>3,195</b>	<b>3,508</b>	<b>2,957</b>	<b>4,969</b>	<b>6,781</b>
<b>Total Equity</b>	<b>3,185</b>	<b>3,809</b>	<b>5,366</b>	<b>8,663</b>	<b>9,829</b>
<b>Total Liabilities &amp; Equity</b>	<b>6,380</b>	<b>7,317</b>	<b>8,323</b>	<b>13,632</b>	<b>16,610</b>

Goodwill suggests some amount of acquisitions

Almost no debt, acquisitions finance through cash-on hand

Source: Company Filings

# Company Financials – Cash Flow



(in \$ millions, unless noted)

Cash Flow	2011	2012	2013	2014	2015
<b>Cash Flow From Operations</b>					
Net Income	865	745	665	3,406	1,303
Non-Cash Adjustments	368	534	798	759	1,064
Changes in NWC	(160)	104	(0)	64	(31)
<b>Cash Flow from Operations</b>	<b>1,074</b>	<b>1,383</b>	<b>1,463</b>	<b>4,228</b>	<b>2,337</b>
<b>Cash Flow From Investing Activities</b>					
CAPEX	(194)	(150)	(157)	(77)	(115)
Acquisitions	(725)	(97)	(228)	(4,104)	(5,553)
Others	110	(24)	24	151	48
<b>Cash Used in Investing Activities</b>	<b>(809)</b>	<b>(271)</b>	<b>(361)</b>	<b>(4,031)</b>	<b>(5,620)</b>
<b>Cash Flow From Financing Activities</b>					
Cash from Revolving LOC	30	-	-	2,311	3,761
Repayment of Revolving LOC	(30)	-	-	(1,462)	(3,111)
Repayment of Other Debt	(13)	(3)	-	(552)	-
Dividend	(74)	(86)	(96)	(121)	(134)
Other	(109)	(155)	(248)	378	(77)
<b>Cash From Financing Activities</b>	<b>(195)</b>	<b>(244)</b>	<b>(345)</b>	<b>555</b>	<b>439</b>
FX Impact	0	(5)	(0)	(9)	(3)
<b>Net Change in Cash</b>	<b>69</b>	<b>862</b>	<b>757</b>	<b>743</b>	<b>(2,847)</b>
<b>Start of Period Cash</b>	<b>550.6</b>	<b>620</b>	<b>1,482</b>	<b>2,239</b>	<b>2,982</b>
<b>End of Period Cash</b>	<b>620</b>	<b>1,482</b>	<b>2,239</b>	<b>2,982</b>	<b>136</b>

Significant cash generation...

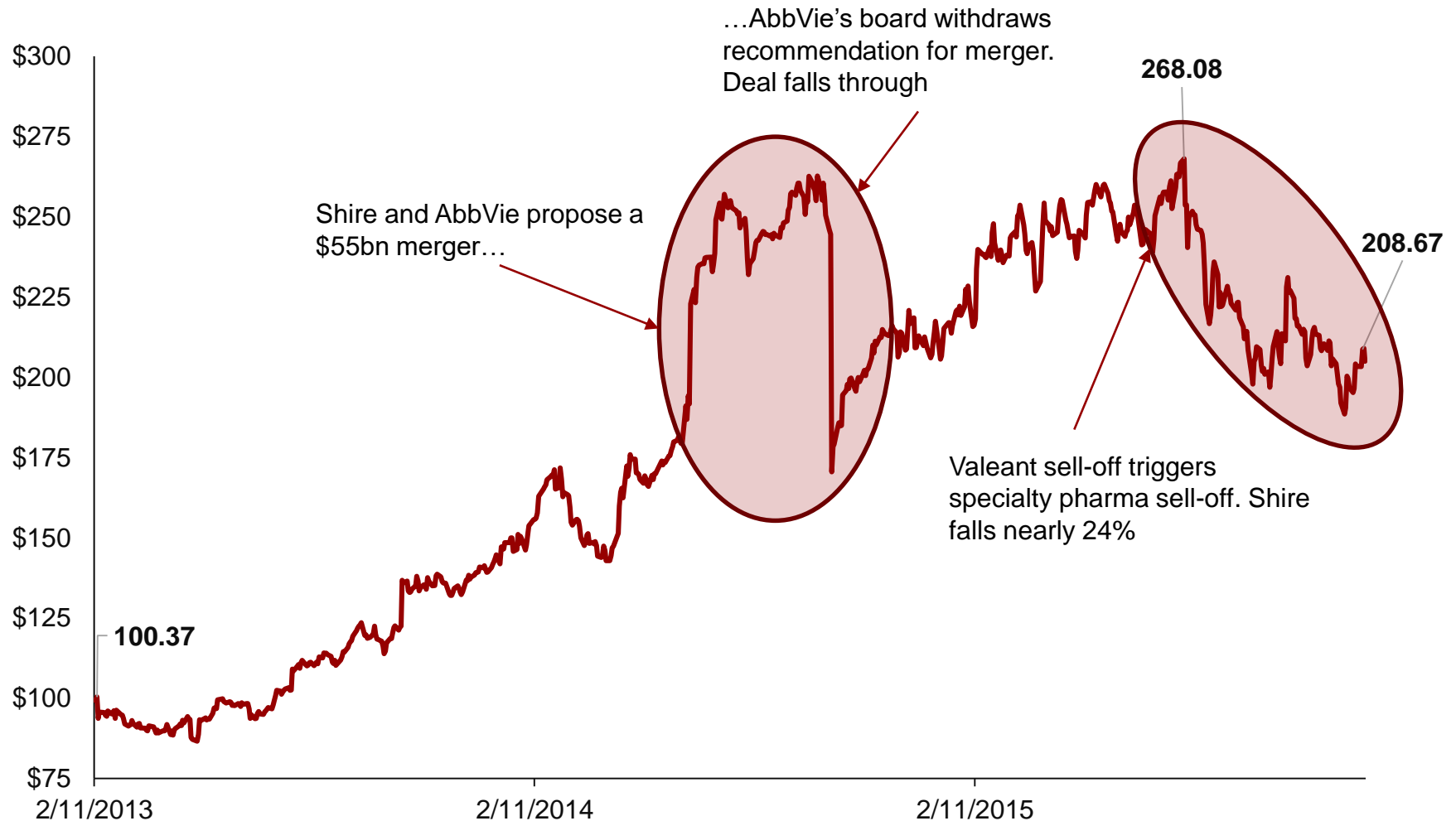
Insignificant CAPEX requirements,  
most of the CFO flows to equity

Source: Company Filings

# Annotated Stock Chart



## Shire 2YR Stock Chart



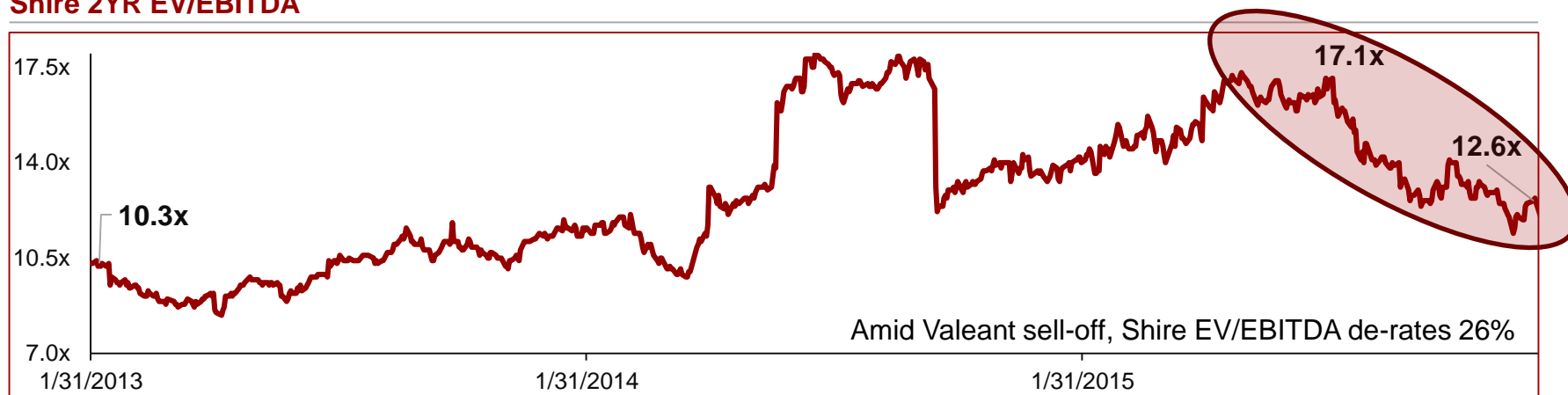
Source: Bloomberg

# Multiple Valuation

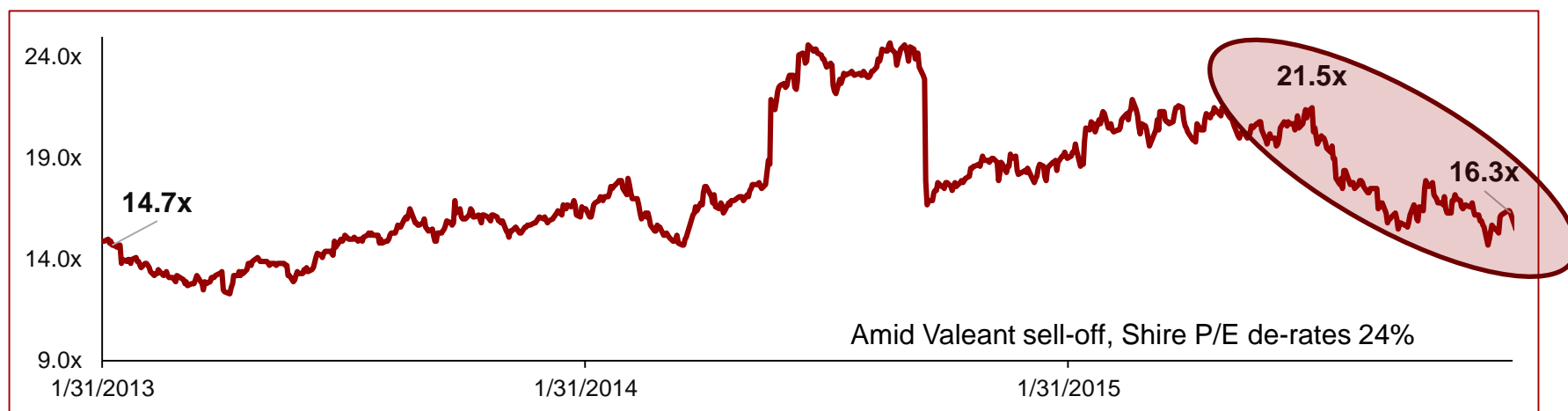


Most of Shire's performance can be explained from EBITDA and EPS growth

## Shire 2YR EV/EBITDA



## Shire 2YR P/E



Source: Bloomberg

# The Old Baxalta (2016)

NYSE:BXLT

SECTION III

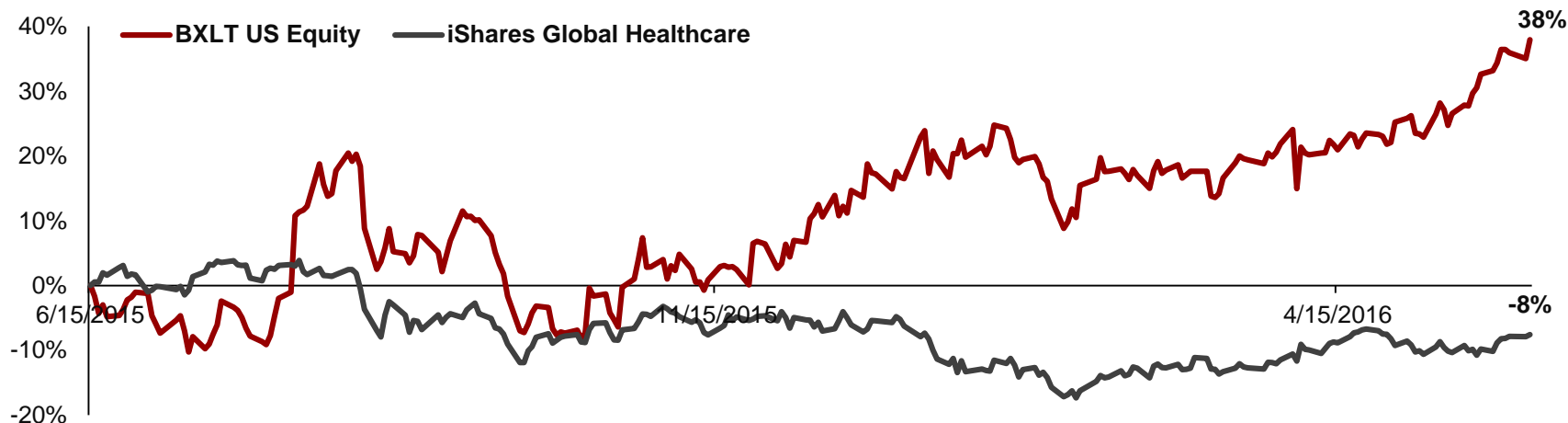
# Baxalta Company Overview

## A Snapshot of the Old Baxalta

### Company Overview

- Baxalta is a global innovative biopharmaceutical leader focused on developing products in areas of unmet need for conditions that are considered rare diseases.
- The firm mainly focuses on **hemophilia**, **immunology** and **oncology**
- Baxter International decided to spin-off Baxalta in early 2015. Baxter found the rare disease focus incompatible with the firm's existing business.

In USD, millions	2012	2013	2014	2015
<b>Revenue</b>	<b>5,310</b>	<b>5,555</b>	<b>5,952</b>	<b>6,148</b>
YoY Growth		4.6%	7.1%	3.3%
<b>Gross Profit</b>	<b>3,070</b>	<b>3,226</b>	<b>3,525</b>	<b>3,750</b>
GM	57.8%	58.1%	59.2%	61.0%
<b>EBITDA</b>	<b>1,743</b>	<b>1,925</b>	<b>1,966</b>	<b>1,693</b>
Margin	32.8%	34.7%	33.0%	27.5%
<b>Net Income</b>	<b>1,205</b>	<b>1,382</b>	<b>1,347</b>	<b>1,052</b>
YoY Growth		14.7%	-2.5%	-21.9%
P/E	N/A	N/A	N/A	25.3x
EV/EBITDA	N/A	N/A	N/A	22.0x
Net Debt/EBITDA	N/A	N/A	N/A	3.1x

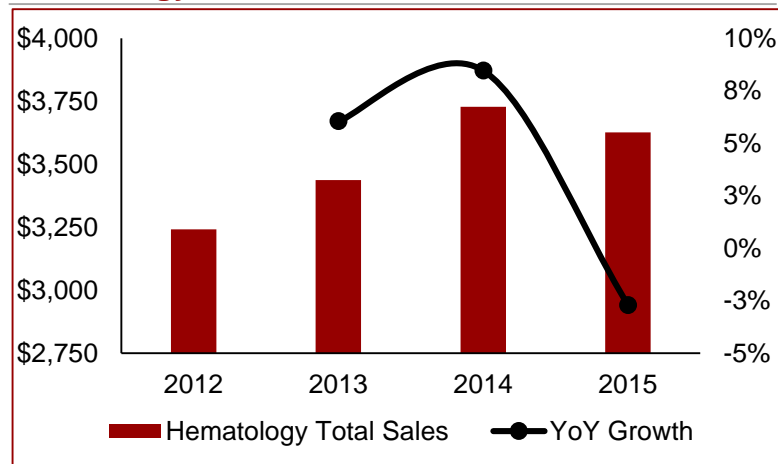


Source: Company Filings, Bloomberg

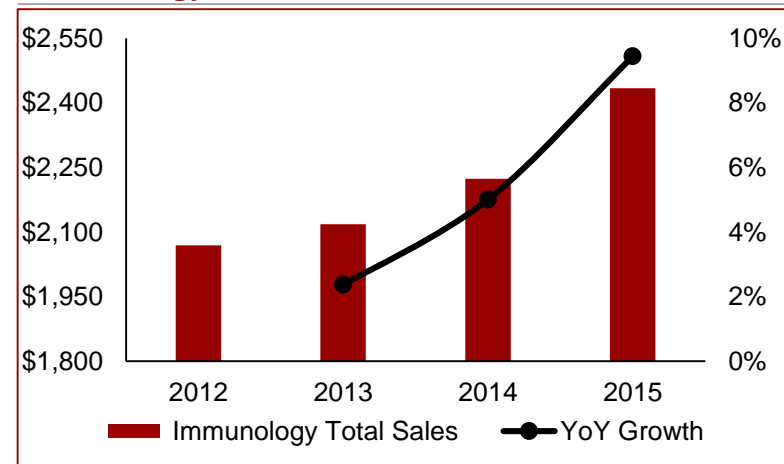
## Operating Segments

### Four Main Operating Segment

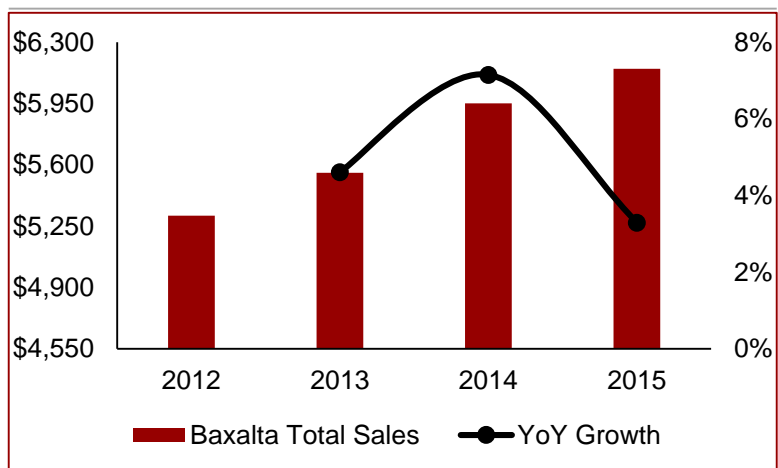
#### Hematology



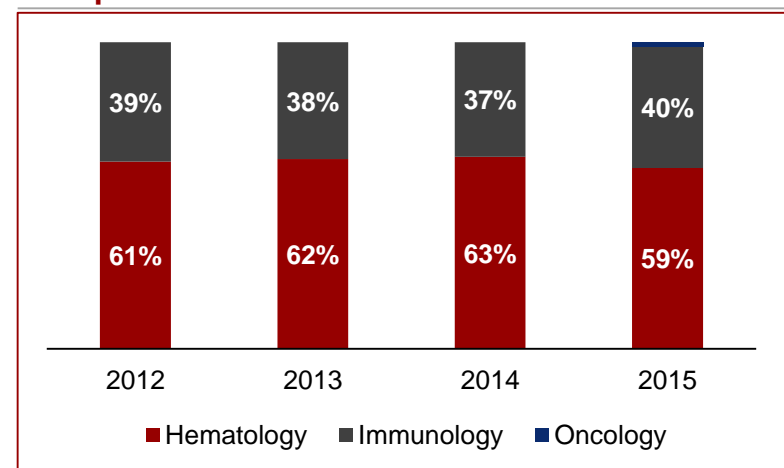
#### Immunology



#### Total Baxalta Revenues



#### Group Revenue Breakdown

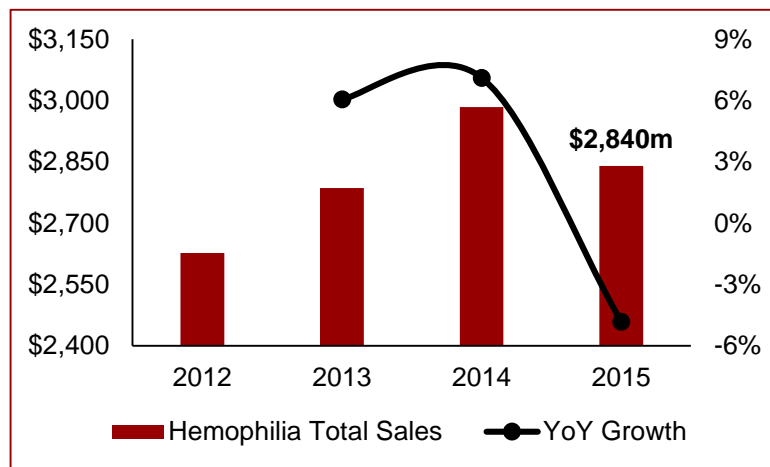


Source: Company Filings

# Operating Segments (Cont'd)

## Main Hematology Segments

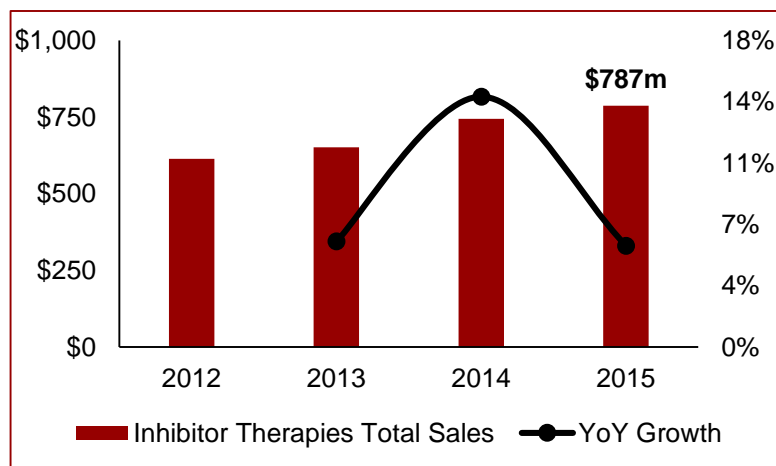
(in \$ millions, unless noted)



### Hemophilia

- Hematology products covers all bleeding disorders which affect the blood clotting process so that it does not work correctly. As such, bleeding disorders cause people to bleed for longer than normal.
- The issue relates to missing proteins (known as clotting factors). There are two types of hemophilia, type A and B. Type A results in people lacking factor 8, while type B results from lacking factor 9

- **Hemophilia Market Size \$10bn, CAGR of 6%**



### Inhibitor Therapies

- Inhibitor Therapies relates to the treatment of patients whose body rejects the hemophilia (A or B) treatment. The body's defense mechanisms rejects the injected factor 8 or 9 protein
- The treatment for this reaction uses bypassing agents that work around inhibitors and help blood clot
- **Overall Inhibitor Market Size \$17bn, but includes other treatments besides hemophilia**

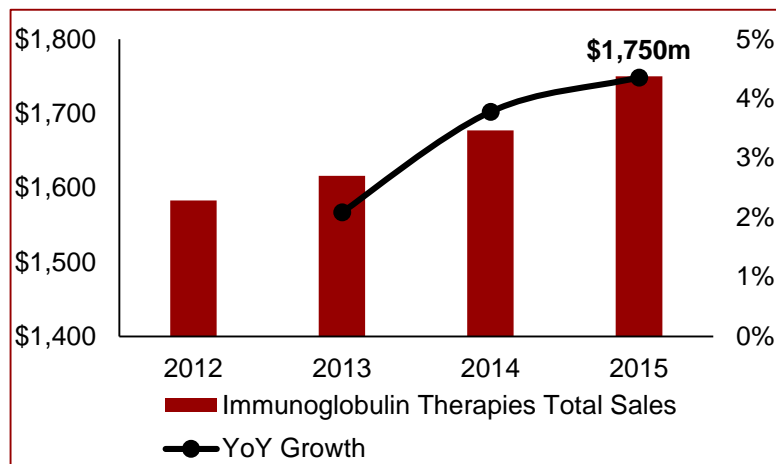
Source: Company Filings



# Operating Segments (Cont'd)

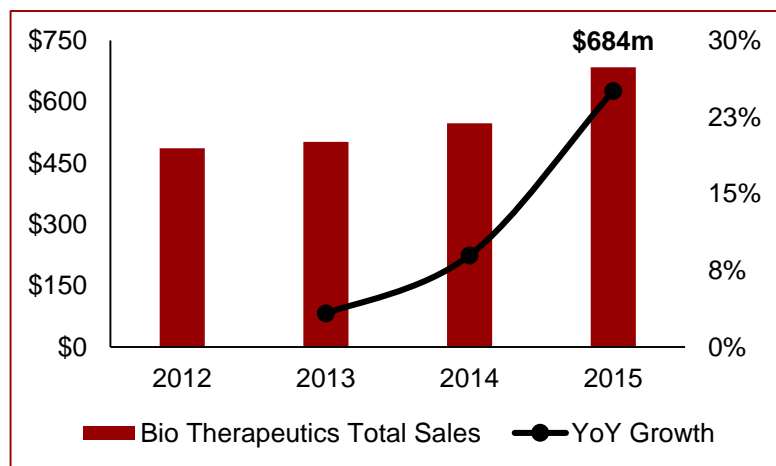
## Main Immunology Segments

(in \$ millions, unless noted)



### Immunoglobulin Therapies

- Primary immunodeficiencies (PID) are a group of more than 300 disorders in which part of the body's immune system is missing or does not function properly.
- With a deficient immune system, a patient is susceptible to typically trivial diseases
- Market Size of Immunoglobulin Therapies \$9bn, CAGR of 7%**



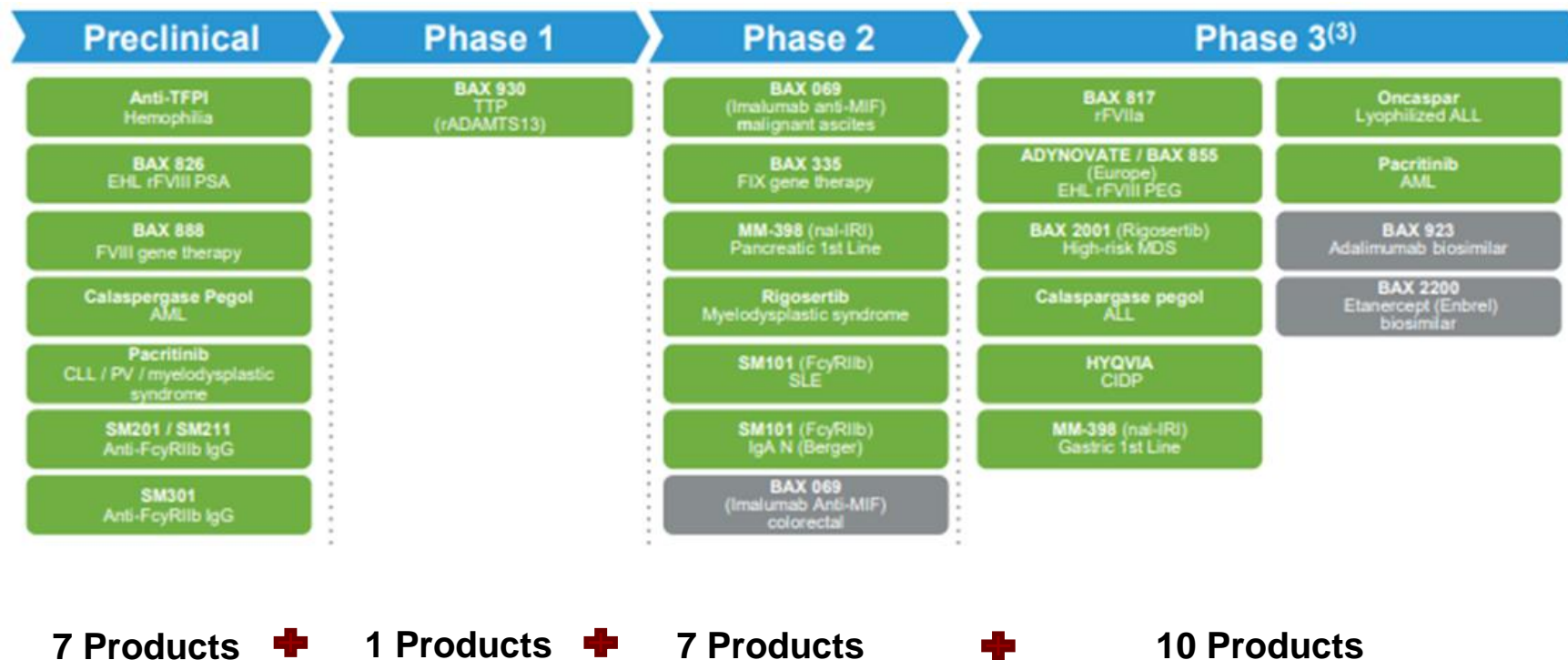
### Bio Therapeutics

- Mainly this segment relates to Albumin products. Human albumin is produced in the liver and is essential for the normal functioning. Namely, maintaining the oncotic pressure, serve as a free radical scavenger and to facility transportation of fatty acids.
- Expected Market Size to Reach \$10bn by 2025**

Source: Company Filings

# Baxalta's 2016 Pipeline

Significant exposure to rare diseases



25 products in development, 90% targeting rare diseases

# Company Financials – P&L

(in \$ millions, unless noted)

Income Statement	2012	2013	2014	2015
<b>Total Revenue</b>	<b>5,310</b>	<b>5,555</b>	<b>5,952</b>	<b>6,148</b>
YoY Growth		4.6%	7.1%	3.3%
<b>COGS</b>	<b>(2,240)</b>	<b>(2,329)</b>	<b>(2,443)</b>	<b>(2,386)</b>
<b>Gross Profit</b>	<b>3,070</b>	<b>3,226</b>	<b>3,509</b>	<b>3,762</b>
Margin	57.8%	58.1%	59.0%	61.2%
<b>R&amp;D</b>	<b>(581)</b>	<b>(595)</b>	<b>(820)</b>	<b>(1,176)</b>
% of Product Sales	-10.9%	-10.7%	-13.8%	-19.1%
<b>SG&amp;A</b>	<b>(913)</b>	<b>(1,017)</b>	<b>(1,053)</b>	<b>(1,442)</b>
% of Sales	-17.2%	-18.3%	-17.7%	-23.5%
<b>Total Operating Expenses</b>	<b>(1,494)</b>	<b>(1,612)</b>	<b>(1,873)</b>	<b>(2,618)</b>
<b>Operating Income</b>	<b>1,576</b>	<b>1,614</b>	<b>1,636</b>	<b>1,144</b>
Margin	29.7%	29.1%	27.5%	18.6%
Financial Expense	-	-	-	(48)
Other	(15)	(1)	(104)	102
<b>Income Before Taxes</b>	<b>1,561</b>	<b>1,613</b>	<b>1,532</b>	<b>1,198</b>
<b>Taxes</b>	<b>(356)</b>	<b>(325)</b>	<b>(346)</b>	<b>(270)</b>
Tax Rate	-22.8%	-20.1%	-22.6%	-22.5%
Gain (Loss) from Disc. Oper.	43	-	551	28
<b>Net Income</b>	<b>1,248</b>	<b>1,288</b>	<b>1,737</b>	<b>956</b>

Solid top-line growth

Improving GM

Significant increase in R&D investments

Declining NI, mainly due to incremental increase in R&D and G&A

Source: Company Filings

# Company Financials – Cash Flow

(in \$ millions, unless noted)

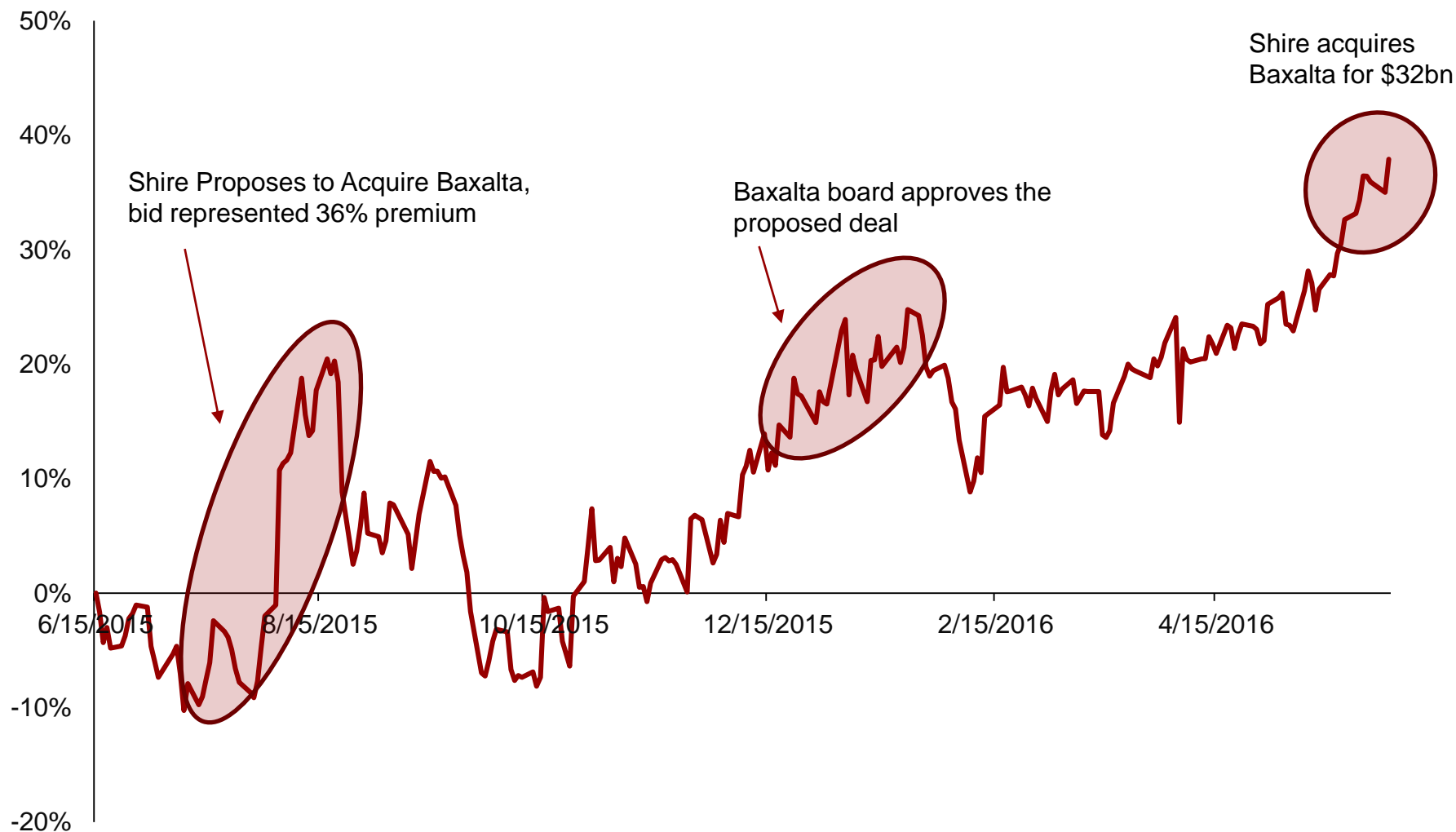
Cash Flow	2012	2013	2014	2015
<b><u>Cash Flow From Operations</u></b>				
Net Income	1,248	1,288	1,737	956
Non-Cash Adjustments	405	413	166	311
Changes in NWC	(245)	(153)	(530)	(468)
<b>Cash Flow from Operations</b>	<b>1,408</b>	<b>1,548</b>	<b>1,373</b>	<b>799</b>
<b><u>Cash Flow From Investing Activities</u></b>				
CAPEX	(521)	(797)	(970)	(1,216)
Acquisitions	(163)	(111)	(185)	(1,163)
Others	(13)	(69)	654	86
<b>Cash Used in Investing Activities</b>	<b>(697)</b>	<b>(977)</b>	<b>(501)</b>	<b>(2,293)</b>
<b><u>Cash Flow From Financing Activities</u></b>				
Cash from LT Debt	-	-	-	4,945
Repayment of Debt	-	-	-	(4)
Net Transactions with Baxter	(711)	(571)	(856)	(2,455)
Dividend	-	-	-	(47)
Other	-	-	(16)	53
<b>Cash From Financing Activities</b>	<b>(711)</b>	<b>(571)</b>	<b>(872)</b>	<b>2,492</b>
FX Impact	-	-	-	3
<b>Net Change in Cash</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,001</b>
<b>Start of Period Cash</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>End of Period Cash</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,001</b>

Declining CFO due to incremental increase of R&D and G&A expenses

Significant CAPEX compared to CFO, ramp-up mainly related to growth CAPEX

Cash short-fall financed through debt

Source: Company Filings



Source: Bloomberg

# The Merger

## SECTION IV

# The Merger Headlines

## Major Merger Between Two Rare Disease Titans

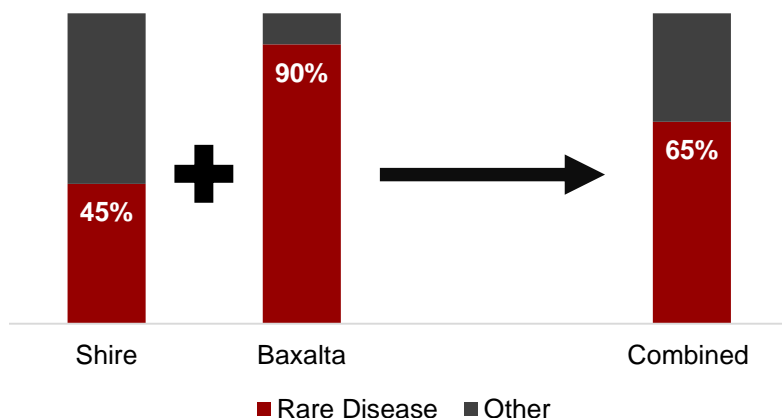
### Strategic Rationale

- This merger would allow Shire to become the leader in rare diseases by both revenue and pipeline
- Shire would also increase its exposure to the rare disease industry, with the combined entity generating 65% of its revenues from rare diseases
- Projected \$500m cost synergies with a combined tax rate of 16-17%

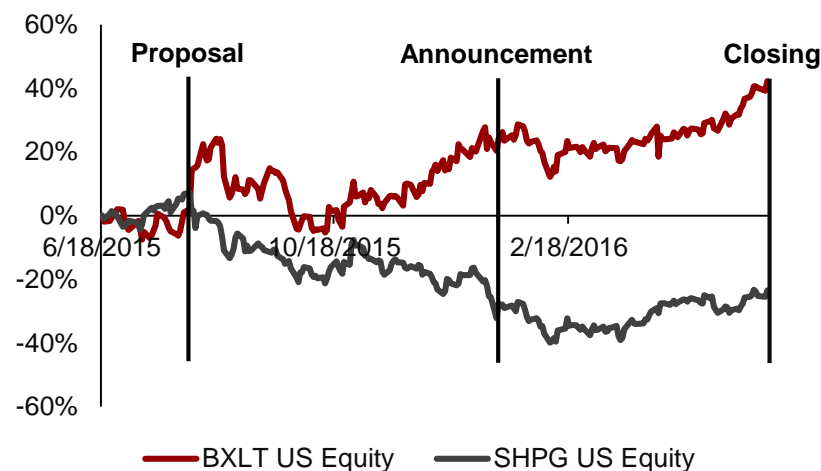
### Financial Considerations

- Baxalta shareholders will receive \$18 in cash and 0.1482 Shire ADR shares per Baxalta share. This implies a value of \$45.57 per Baxalta share.
- The transaction values Baxalta at \$32bn, a 36% premium compared to the pre-announcement share price
- Shire to issue \$20bn in debt to finance transaction. Goal to reduce leverage to 2.0x-3.0x 12-18 months post-closing

### Rare Disease Sales to Total Sales



### Shire & Baxalta Share Price During Transaction



Source: Company Filings

# The New Shire

NYSE:SHPG

SECTION V



# Shire PLC. Company Overview

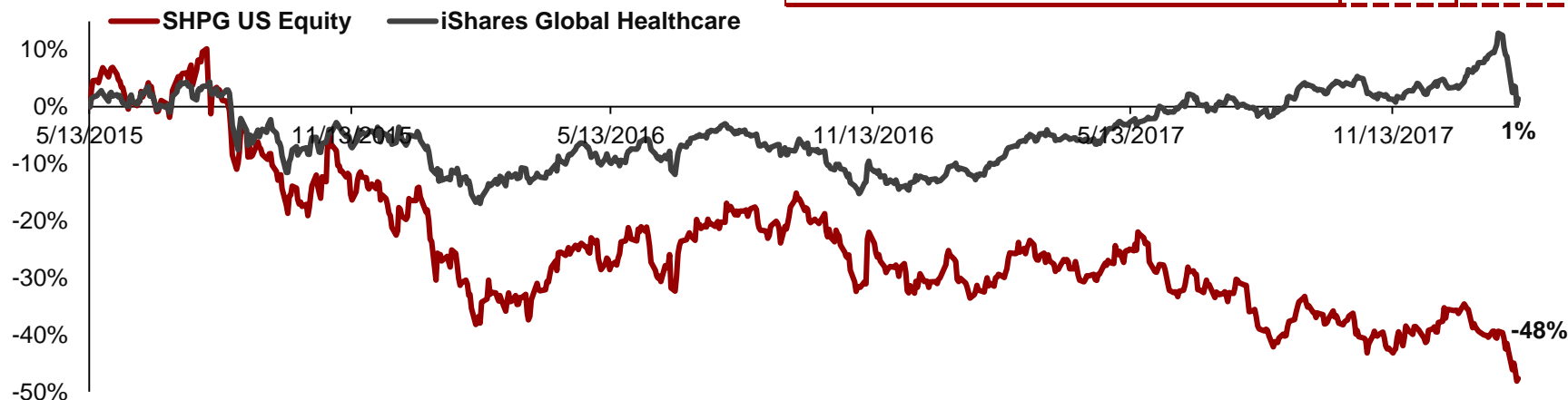


## A Snapshot of the New Shire

### Company Overview

- Shire PLC is a leading biotech company, focusing on developing and marketing innovative medicines for patients with rare diseases and other select conditions
- The firm focuses mainly on **Neuroscience**, **Gastrointestinal** and **Internal Medicine**. More specifically, Shire targets conditions considered as “rare disease”
- Following the recent merger with Baxalta, Shire extend its rare disease exposure by adding **hemophilia**, **immunology** and **oncology** to its portfolio

In USD, millions	2015	2016	2017E	2018E
<b>Revenue</b>	<b>6,417</b>	<b>11,397</b>	<b>14,970</b>	<b>15,509</b>
YoY Growth		77.6%	31.4%	3.6%
<b>Gross Profit</b>	<b>5,455</b>	<b>7,590</b>	<b>11,391</b>	<b>11,801</b>
GM	85.0%	66.6%	76.1%	76.1%
<b>EBITDA</b>	<b>2,893</b>	<b>3,556</b>	<b>6,475</b>	<b>6,751</b>
Margin	45.1%	31.2%	43.3%	43.5%
<b>Net Income</b>	<b>1,953</b>	<b>1,606</b>	<b>4,561</b>	<b>4,864</b>
YoY Growth		-17.8%	184.0%	6.6%
P/E	30.6x	74.1x	8.5x	8.0x
EV/EBITDA	20.9x	31.0x	9.1x	8.8x
Net Debt/EBITDA	0.7x	9.2x	5.0x	2.0x

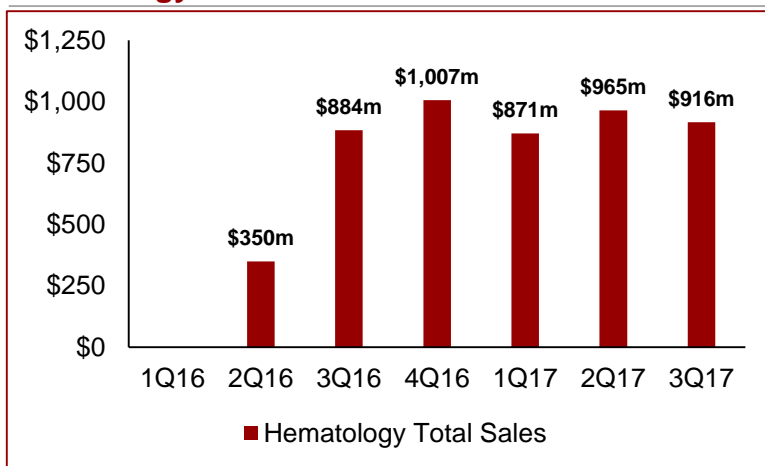


Source: Company Filings, Bloomberg

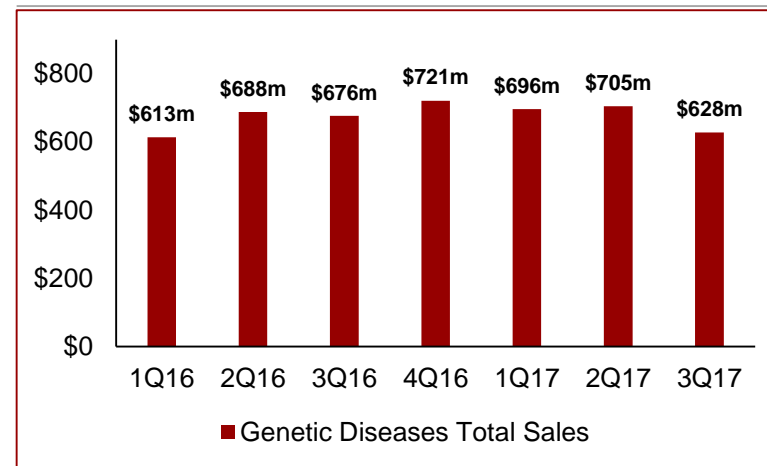
# Operating Segments

## Four Main Operating Segments

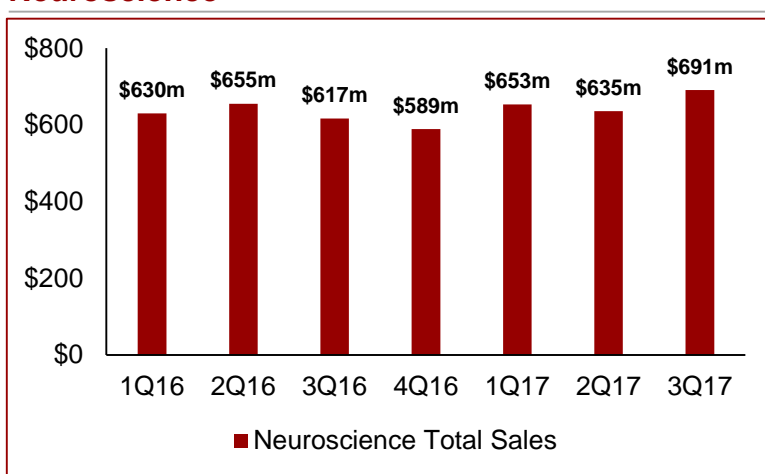
### Hematology



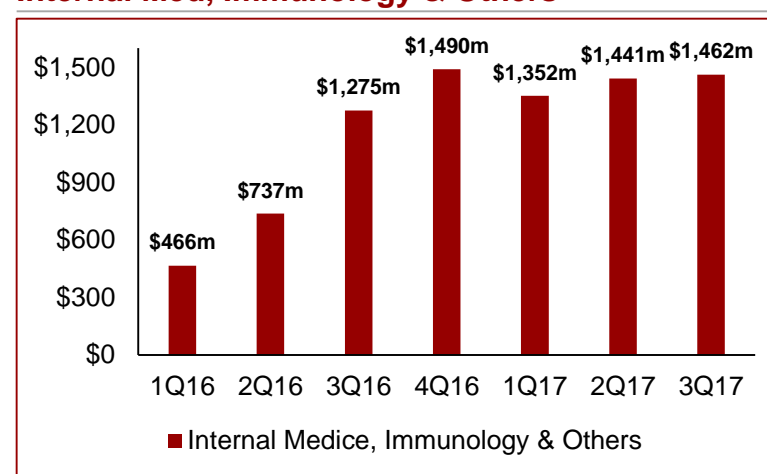
### Genetic Diseases



### Neuroscience



### Internal Med, Immunology & Others

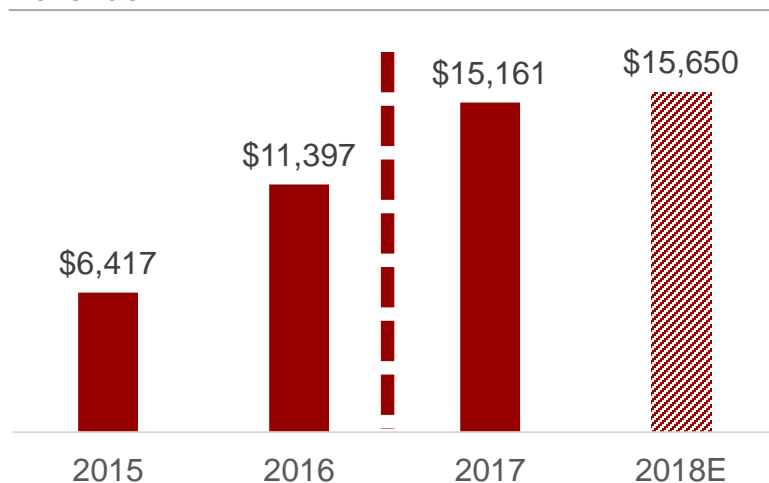


Source: Company Filings

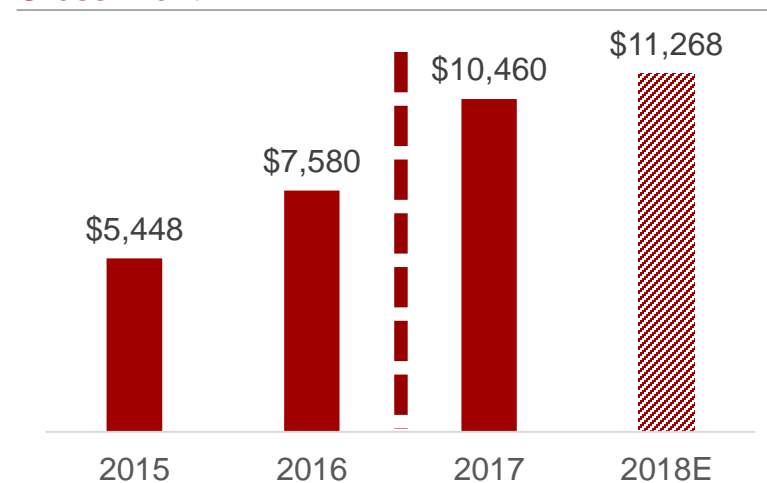
# Key Financials – Before and After Baxalta

## Four Main Operating Segments

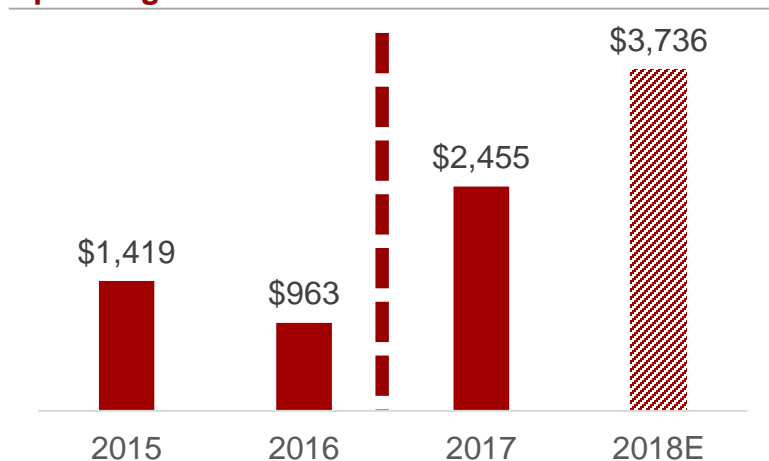
### Revenue



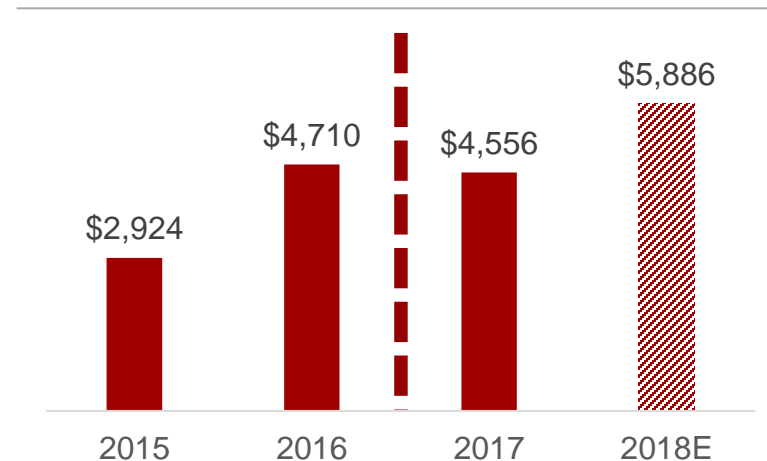
### Gross Profit



### Operating Income



### EBITDA



Source: Company Filings

# Annotated Stock Chart

Shares Down 40% Since Acquisition



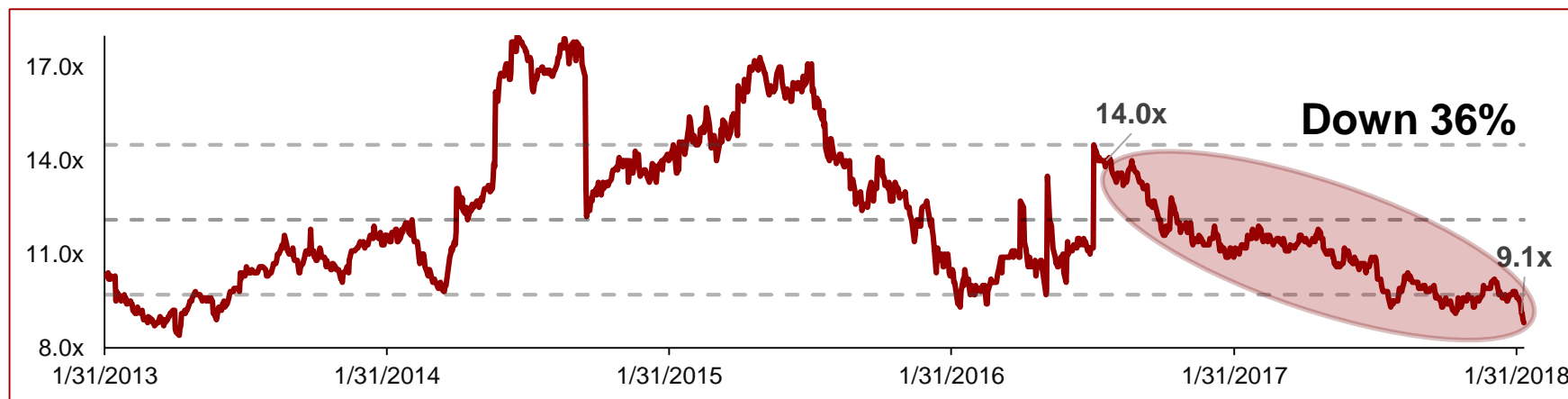
Source: Bloomberg

# Multiple Valuation

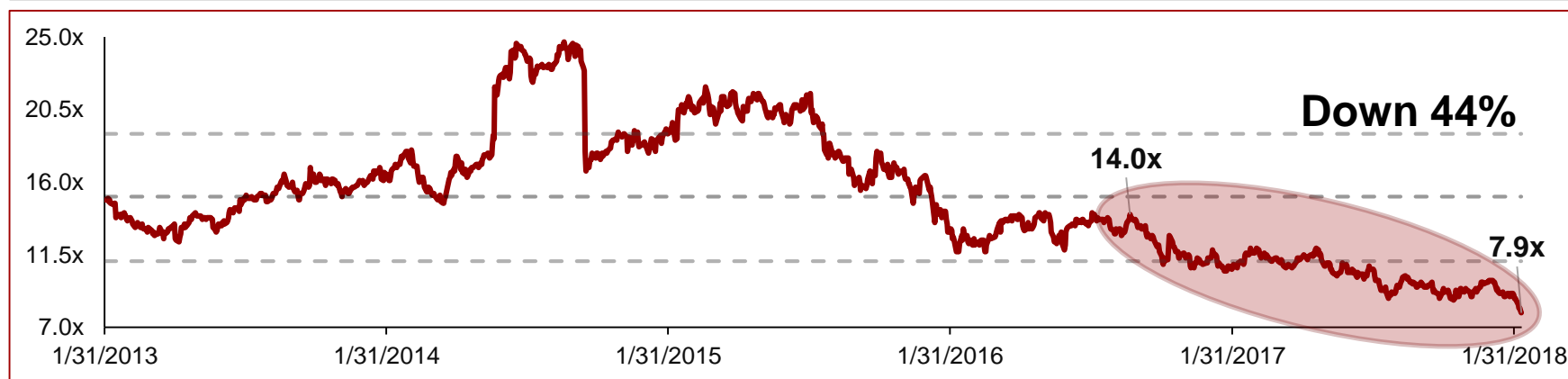


Shire's stock price has been dragged down due to significant de-rating

## Shire 5YR EV/EBITDA



## Shire 5YR P/E



Source: Bloomberg

# The Investment Thesis

SECTION VI

# The Investment Thesis

---

**Risk**

**Debt**

The market has an unjustified obsession with Shire's debt load

**Risk**

**Hematology**

The market is overly discounting the impact from hematology competition

**Catalyst**

**Pipeline**

The market is not giving Shire credit for its strong pipeline

# The Debt



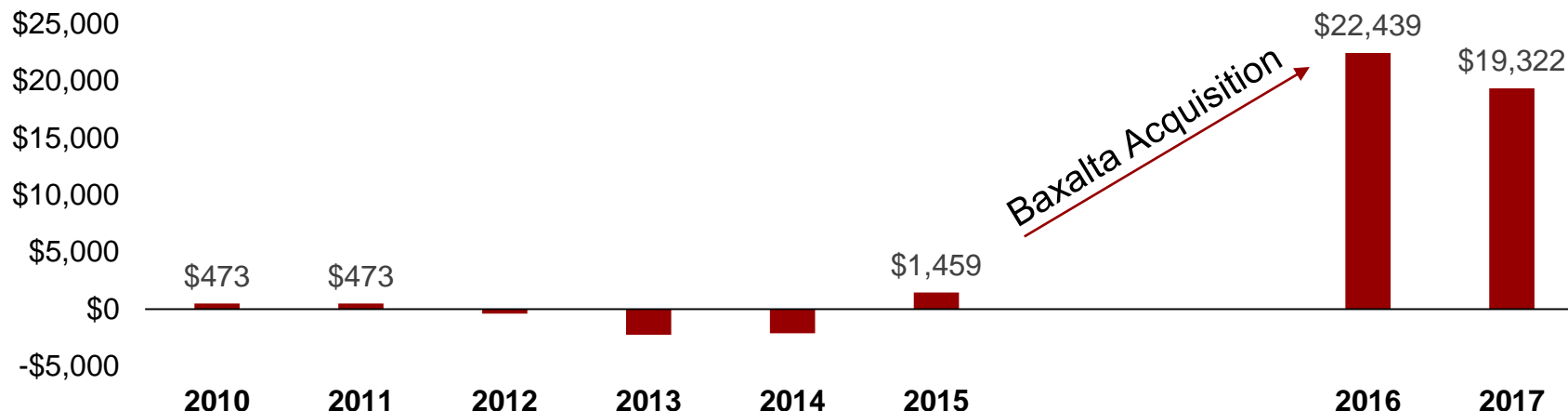


# The Market's Obsession with Debt

## Significant Increase in debt, new territory for legacy Shire investors

(in \$ millions, unless noted)

### Net Debt Progression Over the Years



Ratios - 2015	
Net Debt/EBITDA	0.7x
Net Debt/EBIT	1.0x
Net Debt/Equity	15%
EBITDA to Interest	49.4x



Ratios - 2016	
Net Debt/EBITDA	9.2x
Net Debt/EBIT	23.3x
Net Debt/Equity	78%
EBITDA to Interest	5.2x

Source: Company Filings

# The Market's Obsession with Debt



It's not like Shire acquired nothing...

(in \$ millions, unless noted)

**Pre-Acquisition**  
FCF - \$2,231

	2013	2014	2015
<b>Cash Flows from Operating Activities</b>			
<b>Net Income</b>	665	3,406	1,303
<i>Total Adjustments</i>	798	759	1,064
<i>Total Changes in NWC</i>	(0)	64	(31)
<b>CFO (Adjusted)</b>	1,463	2,594	2,337
<i>Less: CAPEX</i>	(168)	(100)	(124)
<b>FCF</b>	1,295	2,494	2,213

**Post-Acquisition**  
FCF - \$4,155

	2016	2017	2018E
<b>Cash Flows from Operating Activities</b>			
<b>Net Income</b>	327	4,272	3,004
<i>Total Adjustments</i>	2,578	750	2,151
<i>Total Changes in NWC</i>	(246)	(764)	(65)
<b>CFO (Adjusted)</b>	2,659	4,257	5,090
<i>Less: CAPEX</i>	(649)	(799)	(935)
<b>FCF</b>	2,010	3,459	4,155

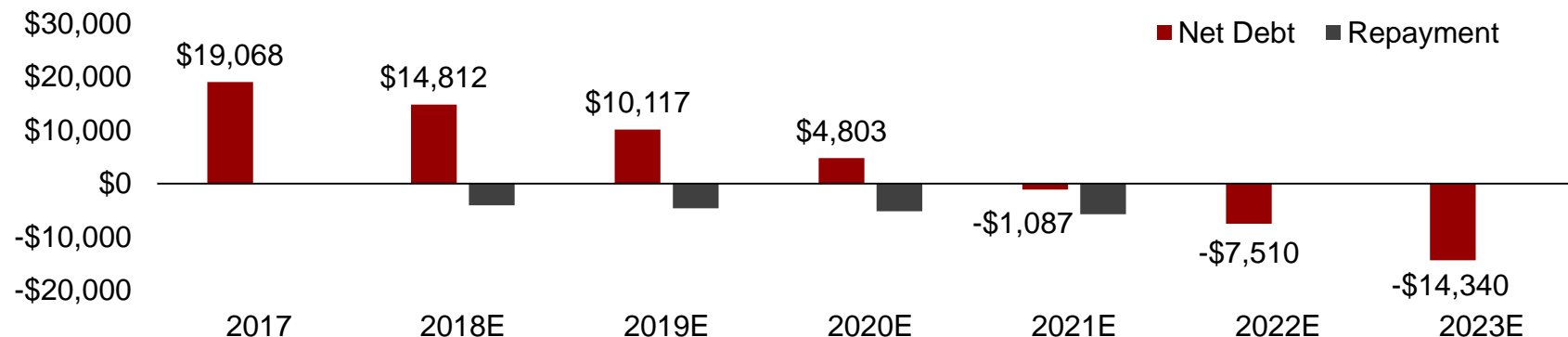
Source: Company Filings

# The Market's Obsession with Debt

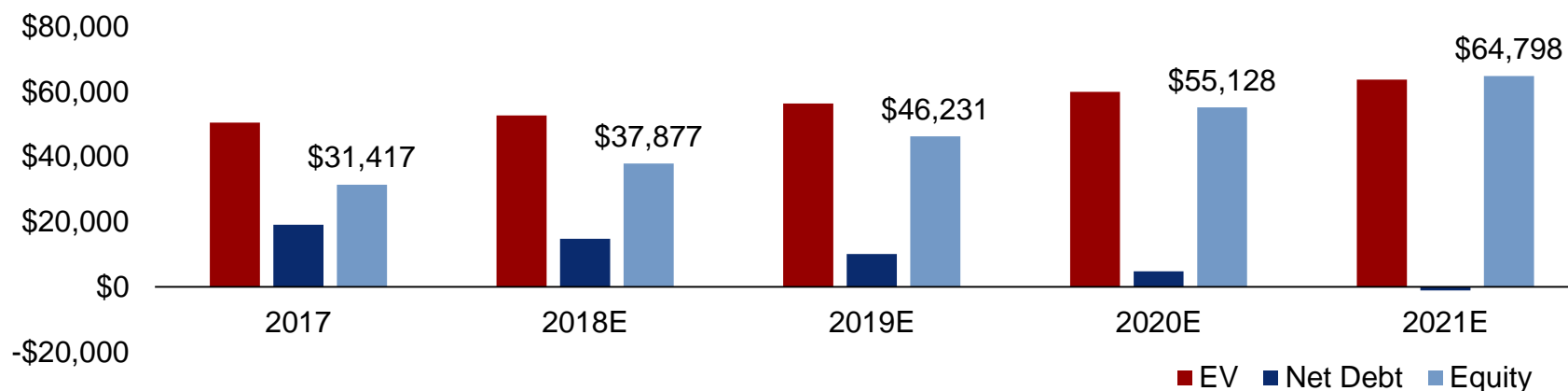
## The Significant Debt Repayment is an Implicit Shareholder Payout

(in \$ millions, unless noted)

### Debt Repayment Schedule



### Bridge to EV Breakdown at Constant EV/EBITDA Multiple



Source: Company Filings

# The Market's Obsession with Debt

## The Significant Debt Repayment is an Implicit Shareholder Payout

(in \$ millions, unless noted)

### Debt Repayment Schedule

	2017	2018E	2019E	2020E	2021E	2022E	2023E
<b>EBITDA</b>	<b>6,311</b>	<b>6,586</b>	<b>7,044</b>	<b>7,491</b>	<b>7,964</b>	<b>8,330</b>	<b>8,531</b>
<i>Multiple</i>	<i>8.0x</i>	<i>8.0x</i>	<i>8.0x</i>	<i>8.0x</i>	<i>8.0x</i>	<i>8.0x</i>	<i>8.0x</i>
<b>EV</b>	<b>50,485</b>	<b>52,689</b>	<b>56,348</b>	<b>59,931</b>	<b>63,710</b>	<b>66,644</b>	<b>68,252</b>
<i>YoY Change</i>		<i>4.4%</i>	<i>6.9%</i>	<i>6.4%</i>	<i>6.3%</i>	<i>4.6%</i>	<i>2.4%</i>
<b>Net Debt</b>	<b>20,703</b>	<b>16,477</b>	<b>11,812</b>	<b>6,529</b>	<b>670</b>	<b>(5,720)</b>	<b>(12,518)</b>
<b>Equity</b>	<b>29,782</b>	<b>36,212</b>	<b>44,536</b>	<b>53,402</b>	<b>63,040</b>	<b>72,364</b>	<b>80,770</b>
<i>YoY Change</i>		<i>21.6%</i>	<i>23.0%</i>	<i>19.9%</i>	<i>18.0%</i>	<i>14.8%</i>	<i>11.6%</i>

**Implied equity growth significantly outpaces EV growth due to debt repayment**

# Hematology Competition



# Over Discounting Hematology Competitive Risk



## This competitive risk was acquired through Baxalta

(in \$ millions, unless noted)

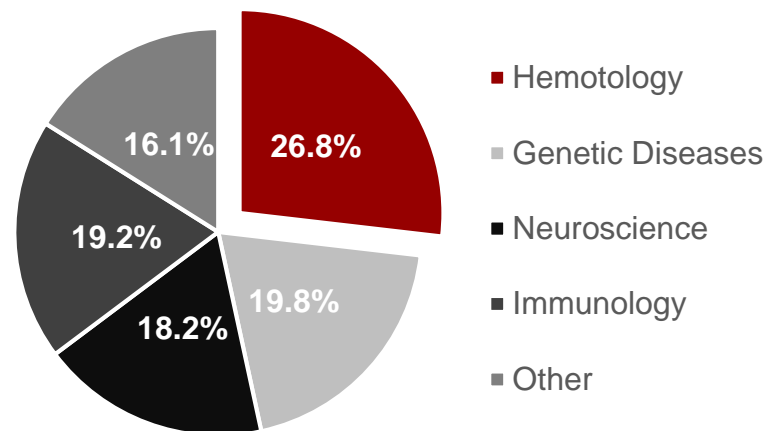
### Hematology for Shire

- Prior to the acquisition of Baxalta, Shire had minimal exposure to Hematology whereas approximately half of Baxalta revenues were 60% hematology.
- Within Baxalta's hematology portfolio
  - 58% of revenue generated through hemophilia products
  - 42% of revenue generated through inhibitor therapies

### The Headline Risk

- Roche is developing a competing suite of Hematology drugs such as ACE910, Haven-1,3,4.
- ACE910 drug has already shown better efficacy than Shire's FEIBA
- The biggest overhang related to ACE910 is related to safety concerns.
  - In some circumstances, patients needed Shire's FEIBA in addition to ACE910 to control bleeding.
- **ACE910 already approved by FDA in November, 2017, remaining drugs still in trials.**

### Shire's Current Revenue Split



**27% of Revenue Potentially at Risk**

# Over Discounting Hematology Competitive Risk

## Sanofi Acquisition of Bioverativ

(in \$ millions, unless noted)

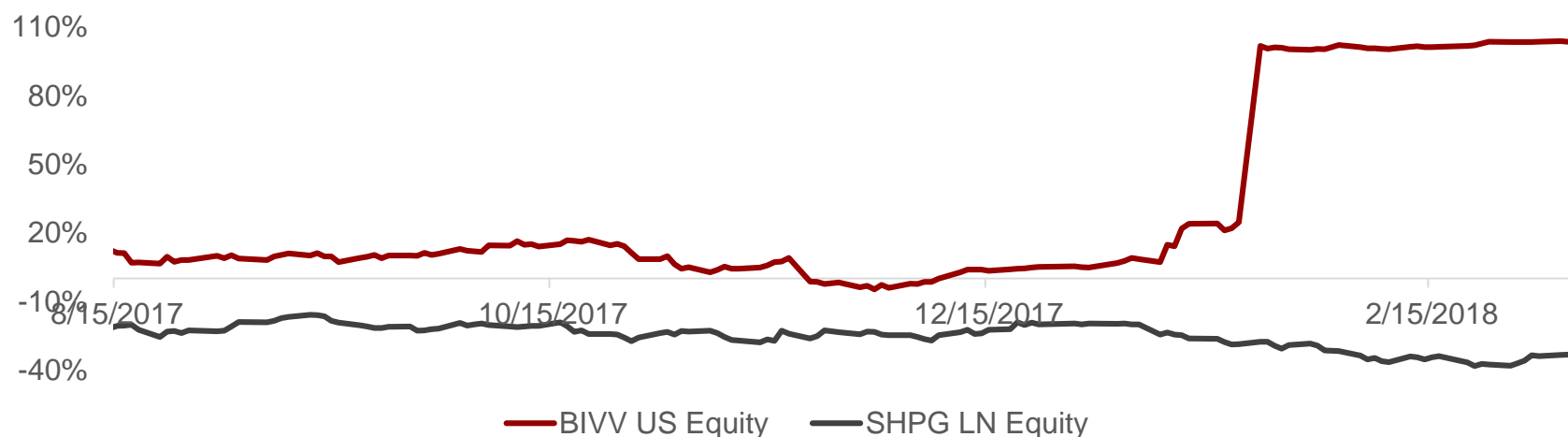
### Sanofi Acquisition

- On January 22, 2018, Sanofi announced the acquisition of Bioverativ, a United States based biotech company specializing in Hemophilia
- Bioverativ was originally part of Biogen, until it's spin-off in early 2017. At the time of the spin-off, Bioverativ was valued at 18x P/E and 11.7x EBITDA.
- Sanofi is paying 24x EBITDA for hemophilia exposure, in spite of Roche's pipeline.

### The Acquisition in Numbers

Price	\$11,137
EV/Revenue	9.5x
EV/EBIT	24.9x
EV/EBITDA	24.1x

### Despite Sanofi's Vote of Confidence in Hemophilia, Shire Shares Remain Unfazed



Source: Company Filings, Morgan Stanley Research

# Over Discounting Hematology Competitive Risk

## Scenario Analysis

(in \$ millions, unless noted)

### Base Case – 0% Sales Growth

Base Case- Scenario 1	2017E	2018E	2019E	2020E	2021E	2022E
Hematology Revenue	3,012	3,012	3,012	3,012	3,012	3,012
YoY Growth		0.0%	0.0%	0.0%	0.0%	0.0%

**Implied Upside from DCF – 61%, PT \$214**

### Bear Case – Complete Loss of Sales

Bear Case - Scenario 3	2017E	2018E	2019E	2020E	2021E	2022E
Hematology Revenue	3,012	-	-	-	-	-
YoY Growth		-100.0%	-100.0%	-100.0%	-100.0%	-100.0%

**Implied Upside from DCF – 33%, PT \$177**

Impact of complete loss of Hematology sales would have a \$37 impact on share price – stock is down \$70 since Baxalta  
**“The current price implies a negative \$4bn valuation for hemophilia using sum-of-the-parts” - BAML**

Source: Company Filings, BAML Research



# Undervalued Pipeline

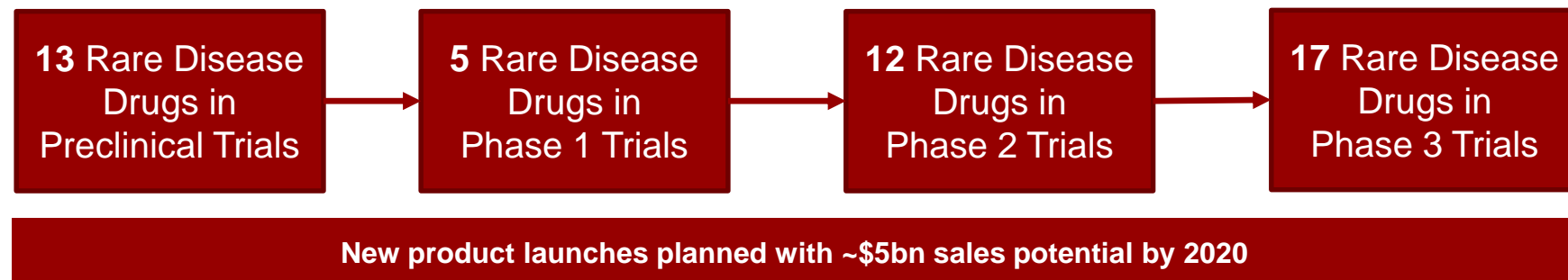


# Shire's Underappreciated Pipeline

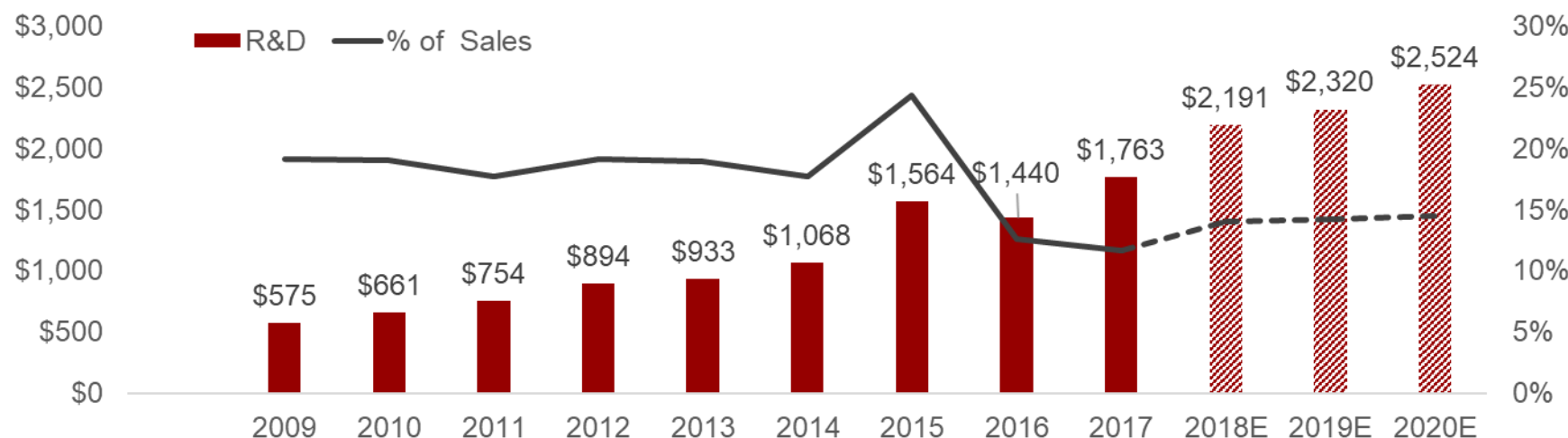
## Promising Pipeline with Continued R&D Expense

(in \$ millions, unless noted)

### Promising Pipeline for Years to Come



### Shire Continues to Invest in its Pipeline



Source: Company Filings

# Shire's Underappreciated Pipeline

## Shire's Top Potential

(in \$ millions, unless noted)

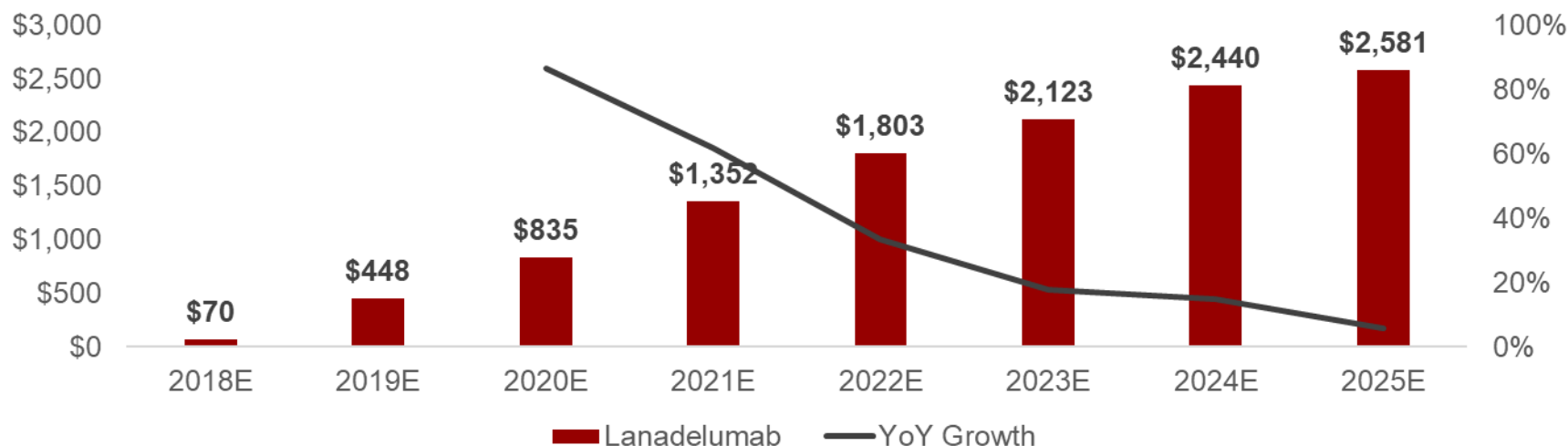
### Lanadelumab

- Shire acquired the rights to manufacture this product from the acquisition of Dyax for \$5.9bn.
- Shire has continued to develop this product since acquiring the rights.
- The expected launch date for Lanadelumab is towards 2H18.
- Peak sales are expected to be around \$2bn

### Lanadelumab Reinforcing Shire's HAE Dominance

- Hereditary Angioedema, otherwise known as HAE, is a rare genetic disorder that results in recurring attacks of severe swelling.
- In particular, HAE occurs in the upper respiratory tract and intestine.
- The HAE market is expect to grow from \$1.7bn in 2016 to \$3.81bn by 2025, 9% CAGR**

### Forecasted Sales, 2018E-2025E



Source: Company Filings, BAML Research, HAE Canada

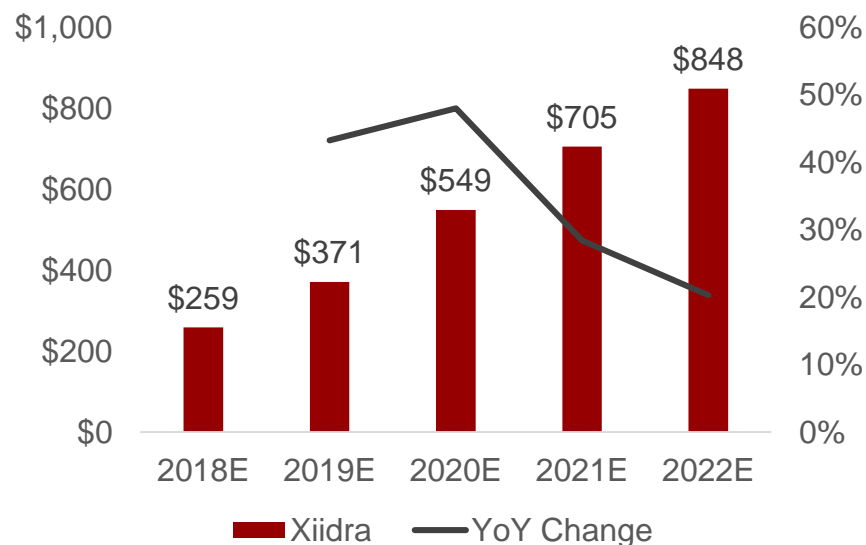
# Shire's Underappreciated Pipeline

## Shire's Top Potential

(in \$ millions, unless noted)

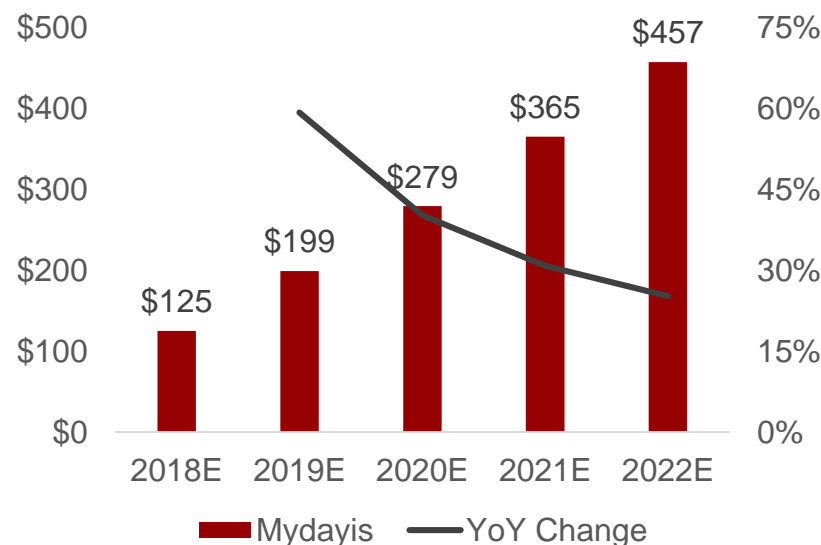
### Xiidra

- Xiidra is used to treat “dry eye syndrome”. This is a fairly common condition simply defined as suffering from dry eyes which leads stinging, burning, irritation, itchiness and many more.
- Nearly 30 million American adults report symptoms consistent with dry eye
- The Global Dry Eye market is expected to reach \$8bn in sales by 2025.**



### Mydayis

- Mydayis is a best-in-class launch in ADHD.
- The product lasts up to 16 hours after dosing.
- Mydayis was approved in the United States in mid-2017 for patients 13 years and older
- As a reminder, the ADHD market is worth around \$9.9bn by 2025 at 5% CAGR**



Source: Company Filings, BAML Research

# Valuation

## SECTION VII



# DCF Output



	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
<b>Sales</b>	<b>15,650</b>	<b>16,282</b>	<b>17,409</b>	<b>18,505</b>	<b>19,653</b>	<b>20,482</b>	<b>20,813</b>	<b>21,541</b>	<b>22,241</b>	<b>22,931</b>
YoY Growth	3.2%	4.0%	6.9%	6.3%	6.2%	4.2%	1.6%	3.50%	3.25%	3.10%
<b>EBITDA</b>	<b>6,512</b>	<b>6,872</b>	<b>7,474</b>	<b>8,082</b>	<b>8,679</b>	<b>9,160</b>	<b>9,446</b>	<b>9,777</b>	<b>10,095</b>	<b>10,408</b>
EBITDA Margin	41.6%	42.2%	42.9%	43.7%	44.2%	44.7%	45.4%	45.4%	45.4%	45.4%
<b>D&amp;A</b>	<b>(2,151)</b>	<b>(2,134)</b>	<b>(2,196)</b>	<b>(2,260)</b>	<b>(2,296)</b>	<b>(2,296)</b>	<b>(2,350)</b>	<b>(2,271)</b>	<b>(2,178)</b>	<b>(2,074)</b>
% of Sales	-13.7%	-13.1%	-12.6%	-12.2%	-11.7%	-11.2%	-11.3%	-10.5%	-9.8%	-9.0%
<b>EBIT</b>	<b>4,362</b>	<b>4,738</b>	<b>5,278</b>	<b>5,822</b>	<b>6,383</b>	<b>6,864</b>	<b>7,096</b>	<b>7,506</b>	<b>7,917</b>	<b>8,334</b>
EBIT Margin	27.9%	29.1%	30.3%	31.5%	32.5%	33.5%	34.1%	34.8%	35.6%	36.3%
<b>Tax</b>	<b>(785)</b>	<b>(853)</b>	<b>(950)</b>	<b>(1,048)</b>	<b>(1,149)</b>	<b>(1,236)</b>	<b>(1,277)</b>	<b>(1,351)</b>	<b>(1,425)</b>	<b>(1,500)</b>
Effective Tax Rate	-18.0%	-18.0%	-18.0%	-18.0%	-18.0%	-18.0%	-18.0%	-18.0%	-18.0%	-18.0%
<b>NOPAT</b>	<b>3,577</b>	<b>3,885</b>	<b>4,328</b>	<b>4,774</b>	<b>5,234</b>	<b>5,628</b>	<b>5,819</b>	<b>6,155</b>	<b>6,492</b>	<b>6,834</b>
<b>Capex</b>	<b>(935)</b>	<b>(977)</b>	<b>(1,045)</b>	<b>(1,110)</b>	<b>(1,179)</b>	<b>(1,229)</b>	<b>(1,249)</b>	<b>(1,292)</b>	<b>(1,334)</b>	<b>(1,376)</b>
Capex-to-Sales	-6.0%	-6.0%	-6.0%	-6.0%	-6.0%	-6.0%	-6.0%	-6.0%	-6.0%	-6.0%
Capex-to-D&A	43.5%	45.8%	47.6%	49.1%	51.3%	53.5%	53.1%	56.9%	61.3%	66.4%
<b>D&amp;A</b>	<b>2,151</b>	<b>2,134</b>	<b>2,196</b>	<b>2,260</b>	<b>2,296</b>	<b>2,296</b>	<b>2,350</b>	<b>2,271</b>	<b>2,178</b>	<b>2,074</b>
<b>Change in NWC</b>	<b>(65)</b>	<b>(84)</b>	<b>(149)</b>	<b>(145)</b>	<b>(152)</b>	<b>(109)</b>	<b>(44)</b>	<b>(44)</b>	<b>(44)</b>	<b>(44)</b>
<b>FCF</b>	<b>4,728</b>	<b>4,959</b>	<b>5,331</b>	<b>5,779</b>	<b>6,200</b>	<b>6,586</b>	<b>6,877</b>	<b>7,090</b>	<b>7,292</b>	<b>7,488</b>
<b>Period</b>	<b>0.50</b>	<b>1.50</b>	<b>2.50</b>	<b>3.50</b>	<b>4.50</b>	<b>5.50</b>	<b>6.50</b>	<b>7.50</b>	<b>8.50</b>	<b>9.50</b>
<b>Discount Factor</b>	<b>0.96</b>	<b>0.87</b>	<b>0.80</b>	<b>0.73</b>	<b>0.66</b>	<b>0.61</b>	<b>0.55</b>	<b>0.51</b>	<b>0.46</b>	<b>0.42</b>
<b>PV of FCF</b>	<b>4,518</b>	<b>4,327</b>	<b>4,249</b>	<b>4,206</b>	<b>4,121</b>	<b>3,998</b>	<b>3,812</b>	<b>3,589</b>	<b>3,371</b>	<b>3,162</b>

**WACC Used** 9.50%

Equity Value per Share	
Sum of PV of FCF	50,078
Longterm Growth Rate	2.5%
PV of Terminal Value	34,352
<b>Enterprise Value</b>	<b>84,429</b>
Net Debt	19,068
<b>Equity Value</b>	<b>65,362</b>
Shares Outstanding	305
<b>Implied Share Price</b>	<b>214.3</b>
<b>Implied Upside</b>	<b>61.1%</b>

## EV/EBITDA Analysis

	Bear	Base	Bull
EBITDA 2018E	\$ 6,512	\$ 6,512	\$ 6,512
<b>EV/EBITDA 2018E</b>	<b>10.0x</b>	<b>12.0x</b>	<b>14.0x</b>
Enterprise Value	\$ 65,125	\$ 78,149	\$ 91,174
Cash	\$ 1,663	\$ 1,663	\$ 1,663
Total Debt	\$ 16,310	\$ 16,310	\$ 16,310
<b>Equity Value</b>	<b>\$ 50,478</b>	<b>\$ 63,503</b>	<b>\$ 76,527</b>
<i>Shares outstanding</i>	<i>305.00</i>	<i>305.00</i>	<i>305.00</i>
<b>Equity Value Per Share</b>	<b>\$ 165.50</b>	<b>\$ 208.21</b>	<b>\$ 250.91</b>
<b>Return Analysis</b>			
Intrinsic Value Per Share	\$ 165.50	\$ 208.21	\$ 250.91
Current Market Price	\$ 133.00	\$ 133.00	\$ 133.00
<b>Entry Price</b>	<b>\$ 133.00</b>	<b>\$ 133.00</b>	<b>\$ 133.00</b>
<b>Implied Return</b>	<b>24.4%</b>	<b>56.5%</b>	<b>88.7%</b>

## P/E

	Bear	Base	Bull
EPS 2018E	\$ 19.82	\$ 19.82	\$ 19.82
<b>P/E 2018E</b>	<b>10.7x</b>	<b>12.8x</b>	<b>15.0x</b>
Price	\$ 212.12	\$ 253.76	\$ 297.37
<b>Return Analysis</b>			
Intrinsic Value Per Share	\$ 212.12	\$ 253.76	\$ 297.37
Current Market Price	\$ 133.00	\$ 133.00	\$ 133.00
<b>Entry Price</b>	<b>\$ 133.00</b>	<b>\$ 133.00</b>	<b>\$ 133.00</b>
<b>Implied Return</b>	<b>59.5%</b>	<b>90.8%</b>	<b>123.6%</b>

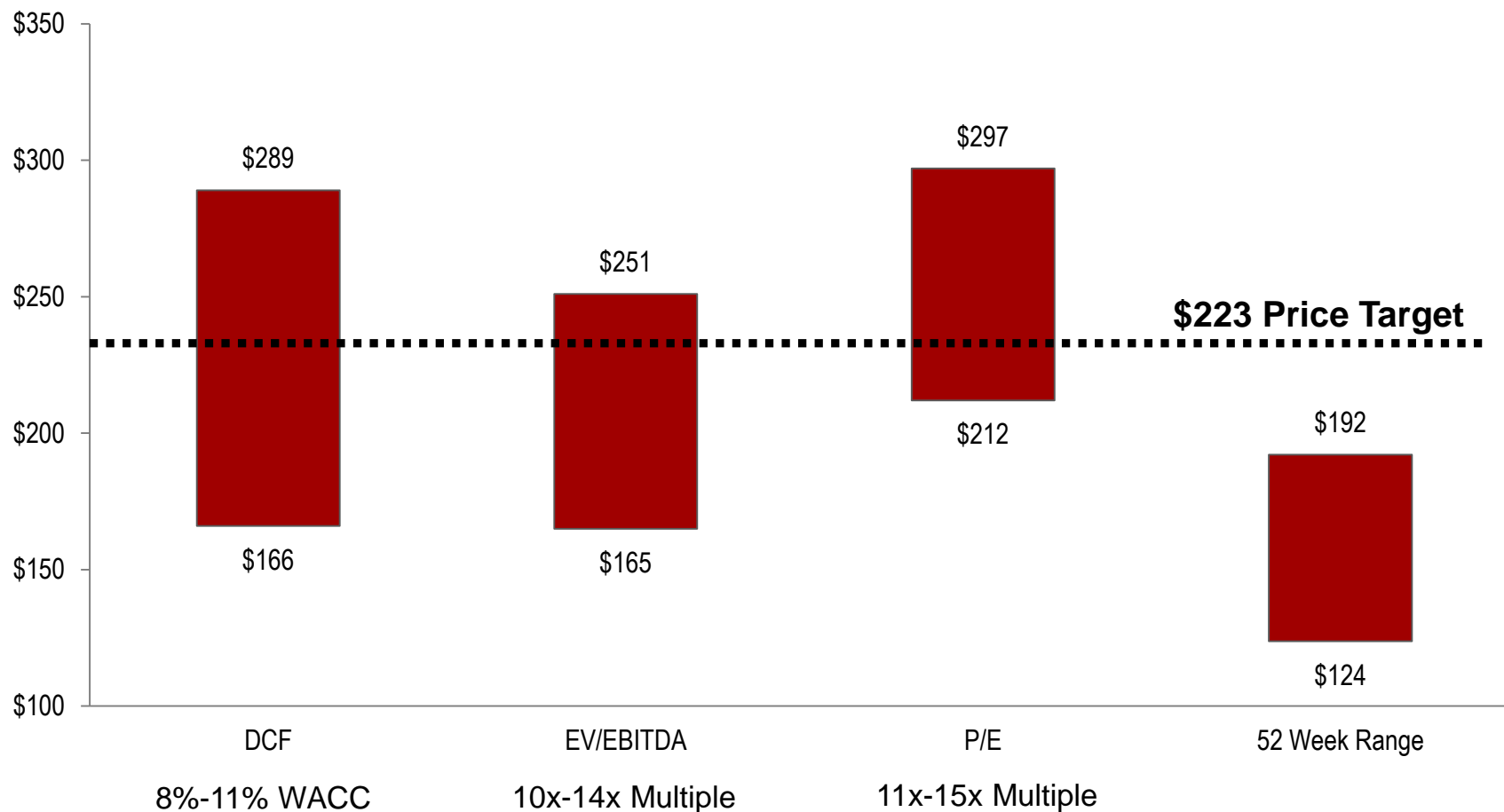
# Implied IRR



Unlevered FCF	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Revenue	15,650	16,282	17,409	18,505	19,653	20,482	20,813	21,541	22,241	22,931
YoY Growth		4.0%	6.9%	6.3%	6.2%	4.2%	1.6%	3.5%	3.3%	3.1%
EBITDA	6,512	6,872	7,474	8,082	8,679	9,160	9,446	9,777	10,095	10,408
YoY Growth		5.5%	8.8%	8.1%	7.4%	5.5%	3.1%	3.5%	3.3%	3.1%
Margin	41.6%	42.2%	42.9%	43.7%	44.2%	44.7%	45.4%	45.4%	45.4%	45.4%
Less: NWC	(65)	(84)	(149)	(145)	(152)	(109)	(44)	(44)	(44)	(44)
Less: CAPEX	(935)	(977)	(1,045)	(1,110)	(1,179)	(1,229)	(1,249)	(1,292)	(1,334)	(1,376)
Less: Tax	(785)	(853)	(950)	(1,048)	(1,149)	(1,236)	(1,277)	(1,351)	(1,425)	(1,500)
Unlevered Operational FCF	4,728	4,959	5,331	5,779	6,200	6,586	6,877	7,090	7,292	7,488
Entry/Exit	(59,633)				86,794					
Unlevered FCF	(54,905)	4,959	5,331	5,779	92,994					
Unlevered IRR	20.7%									
Exit EV/EBITDA	10.0x									

		EV/EBITDA Multiple							
		20.7%	8.5x	9.0x	9.5x	10.0x	10.5x	11.0x	11.5x
EBITDA Margin	39.0%	16.5%	17.8%	19.2%	20.4%	21.7%	22.9%	24.0%	
	40.0%	16.6%	17.9%	19.2%	20.5%	21.8%	23.0%	24.1%	
	41.0%	16.7%	18.0%	19.3%	20.6%	21.9%	23.0%	24.2%	
	42.0%	16.7%	18.1%	19.4%	20.7%	22.0%	23.1%	24.3%	
	43.0%	16.8%	18.2%	19.5%	20.8%	22.0%	23.2%	24.4%	
	44.0%	16.9%	18.3%	19.6%	20.9%	22.1%	23.3%	24.5%	
	45.0%	17.0%	18.4%	19.7%	21.0%	22.2%	23.4%	24.6%	





**Recommend BUY with price target of \$223, representing an implied upside of 68%**

# Disclaimer

---

The print and digital material ("the material") for this presentation was prepared by the analyst team of Desautels Capital Management ("DCM"). The qualitative and statistical information ("the information") contained in the material is based upon various sources and research believed to be reliable and DCM makes every effort to ensure that the information is accurate and up to date, but DCM accepts no responsibility and gives no guarantee, representation or warranty regarding the accuracy or completeness of the information quoted in the material. For reasons of succinctness and presentation, the information provided in the material may be in the form of summaries and generalizations, and may omit detail that could be significant in a particular context or to a particular person. Any reliance placed on such information by you shall be at your sole risk.

Opinions expressed herein are current opinions as of the date appearing in this material only and are subject to change without notice. In the event any of the assumptions used herein do not prove to be true, results are likely to vary substantially. All investments entail risks. There is no guarantee that investment strategies will achieve the desired results under all market conditions and each investor should evaluate its ability to invest for a long term especially during periods of a market downturn. No representation is being made that any account, product, or strategy will or is likely to achieve profits, losses, or results similar to those discussed, if any. This information is provided with the understanding that with respect to the material provided herein, that you will make your own independent decision with respect to any course of action in connection herewith and as to whether such course of action is appropriate or proper based on your own judgment, and that you are capable of understanding and assessing the merits of a course of action. DCM shall not have any liability for any damages of any kind whatsoever relating to this material. You should consult your advisors with respect to these areas. By accepting this material, you acknowledge, understand and accept the foregoing.

No part of this document may be reproduced in any manner, in whole or in part, without the prior written permission of DCM, other than current DCM employees. Should you wish to obtain details regarding the various sources or research carried out by DCM in the compilation of this marketing presentation please email [mcgillhim@gmail.com](mailto:mcgillhim@gmail.com).