

# IF PATENTS ARE FOR PATIENTS THEN PATIENCE WILL BE FOR PATENTS

HEALTHCARE INDUSTRY REVIEW – SEPTEMBER 18 2014

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# HOLDINGS REVIEW

# CUBIST PHARMACEUTICALS

REEVALUATION ON EARNINGS SLIP, THESIS HOLDS

# CUBIST PHARMACEUTICALS

## REEVALUATION ON EARNINGS SLIP, THESIS HOLDS

### COMPANY DESCRIPTION

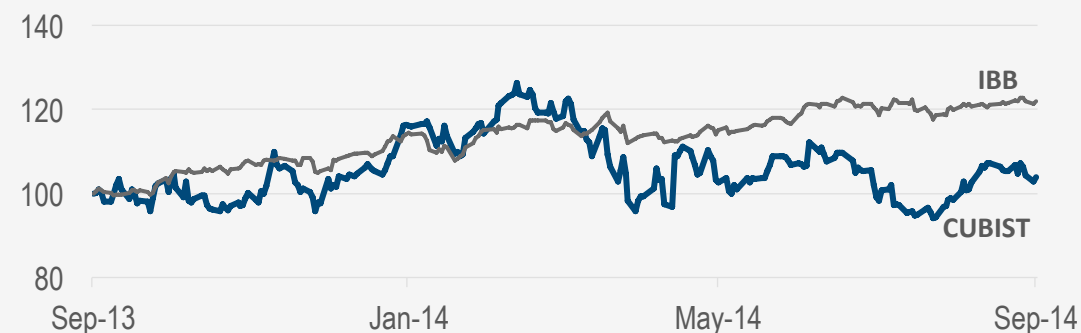
- Bio-pharmaceutical company focused on pharmaceutical products that address unmet medical need in the acute care environment.
- Currently markets CUBICIN, ENTEREG, DIFICID and SIVEXTRO

### MARKET SUMMARY

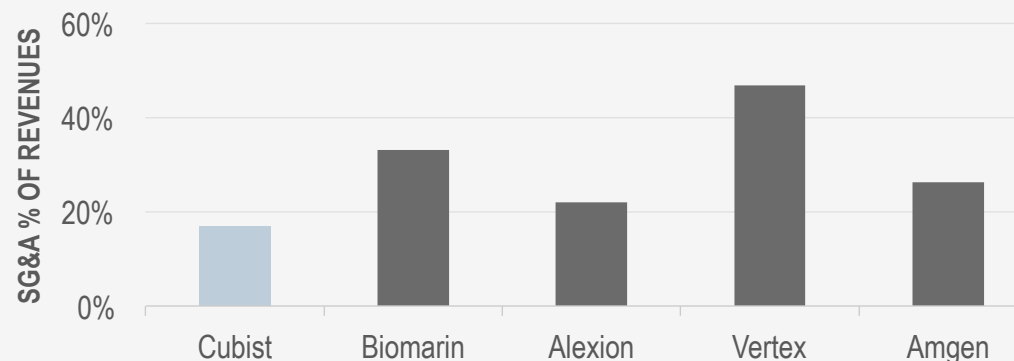
Share Price	\$67.00
Market Capitalization	\$5.14B
52-Week Range	\$58.50 - 82.12
Beta	0.84
EPS	\$0.23

Market summary data as of 9/15/2014. Non-GAAP diluted EPS shown.

### RELATIVE PRICE PERFORMANCE - LTM



### BUSINESS TO HOSPITAL MODEL



# CUBIST PHARMACEUTICALS

## REEVALUATION ON EARNINGS SLIP, THESIS HOLDS

### INVESTMENT THESIS

Cubist Pharma is an attractive investment opportunity due to its strong pipeline and productive R&D activities

Cubist will continue to diversify its product portfolio and achieve success with its current product offering

= Stable investment in the near future

### RECOMMENDATION: HOLD

DCM Revised Target Price

\$90

Upside

35%

Catalysts

1. CXA-201 Approval
2. Hospira legal outcome
3. M&A

### VALUATION

		DISCOUNT RATE				
		6%	7%	8%	9%	10%
TERMINAL MULTIPLE	16.0	\$90	\$86	\$82	\$78	\$75
	17.0	\$95	\$91	\$87	\$83	\$79
	17.5	\$98	\$93	\$89	\$85	\$81
	18.0	\$101	\$96	\$92	\$87	\$84
	18.5	\$103	\$98	\$94	\$90	\$86
	19.0	\$106	\$101	\$96	\$92	\$88
	19.5	\$108	\$103	\$99	\$94	\$90

(US\$M)

	2014	2015	2016	2017	2018
Revenues	1,198.0	1,446.7	1,738.6	2,139.8	1,785.2
EBIT	110.0	306.8	513.7	811.2	583.7
Net Income	48.5	181.9	321.7	524.1	358.3
Diluted EPS	0.5	1.9	3.4	5.5	3.8
Gross Profit Margin %	75.0%	78.0%	78.0%	78.0%	78.0%

# CUBIST PHARMACEUTICALS

LOOKING A TAD EXPENSIVE GIVEN RECENT EARNINGS PULL BACK

(as of 9/15/2014)

COMPANY	MARKET CAP. (B)	ENTERPRISE VALUE (B)	EV/EBITDA NTM	P/E FY2015E	P/FCF	PEG	EV/SALES LTM
Amgen	\$96	\$105	11.8x	14.6x	17.0x	1.95	5.4x
Alexion Pharmaceuticals	\$32	\$31	23.3x	29.0x	55.5x	0.95	15.7x
Valeant Pharmaceuticals	\$48	\$63	15.1x	13.7x	48.7x	1.05	8.4x
Vertex Pharmaceuticals	\$19	\$17	-	56.0x	-	-	20.6x
Shire PLC	\$30	\$28	9.8x	14.9x	21.9x	1.24	0.5x
Actelion	\$12	\$12	16.0x	17.9x	17.4x	1.83	6.1x
Average			15.2x	21.8x	29.1x	1.36	9.1x
<b>Cubist Pharmaceuticals</b>	<b>\$5</b>	<b>\$5</b>	<b>18.7x</b>	<b>36.4x</b>	<b>13.6x</b>	<b>3.00</b>	<b>4.9x</b>

**TSO<sub>3</sub> INC.**

**PATIENCE IS A VIRTUE**



# TSO<sub>3</sub> INC.

PATIENCE IS A VIRTUE

## COMPANY DESCRIPTION

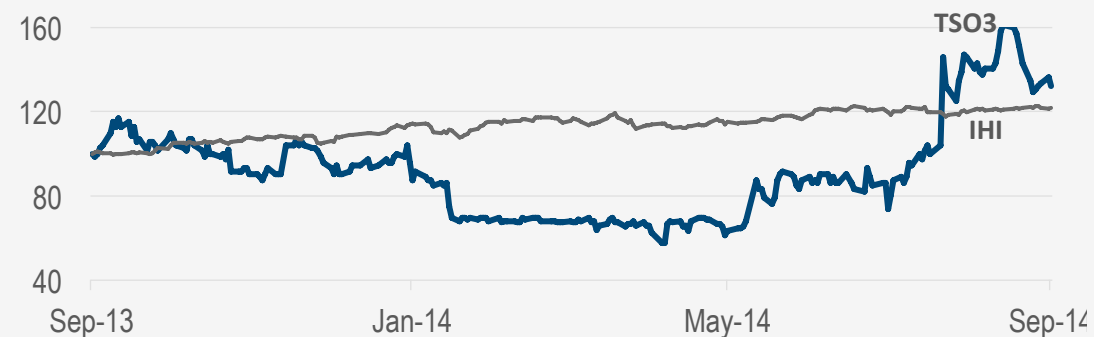
- TSO3 Inc. is an innovator in low-temperature sterilization technologies for medical devices.
- It is engaged in the research, development, commercialization, and licensing of sterilization processes for heat-sensitive medical equipment.

## MARKET SUMMARY

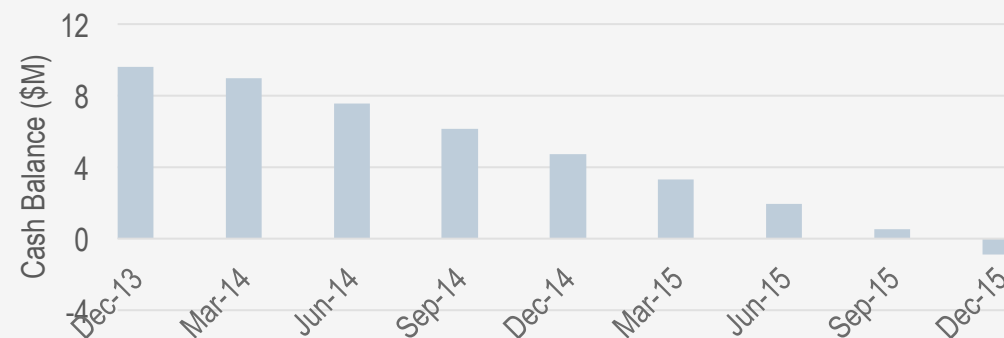
Share Price	\$1.11
Market Capitalization	\$81.3M
52-Week Range	\$0.40 – 1.20
Beta	1.60
EPS	(\$0.12)

Market summary data as of 9/15/2014

## RELATIVE PRICE PERFORMANCE - LTM



## CASH BURN



# TSO<sub>3</sub> INC.

PATIENCE IS A VIRTUE

## INVESTMENT THESIS

TSO<sub>3</sub> has an industry-changing sterilization product that makes them an extremely attractive acquisition target given FDA approval

With sufficient cash to last until ~2016 and an approval expected before the end of 2014 we are cautiously optimistic

## RECOMMENDATION: HOLD

DCM Target Price	\$1.50
Upside	60%
Catalysts	1. Regulatory updates 2. Regulatory updates 3. Regulatory updates

## POSSIBLE OUTCOMES

- 1 Obtains FDA approval and announces supply chain agreement
- 2 Obtains FDA and gets bought out by large player (Johnson & Johnson, 3M, Getinge...)
- 3 Gets bought out by large player before receiving FDA approval
- 4 Does not get FDA approval

# ZOETIS

REVISITING THE OPPORTUNITY

# ZOETIS

## MORE DIGGING AND A NEW ENTRY PRICE NEEDED

### COMPANY DESCRIPTION

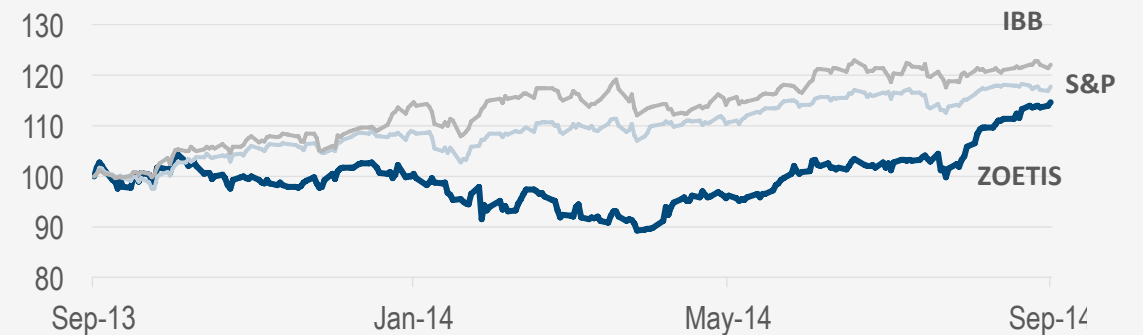
- Global leader in the discovery, development, manufacturing and commercialization of animal health medicines and vaccines
- A Pfizer spin-off, they're the only pure-play in the animal healthcare space

### MARKET SUMMARY

Share Price	\$36.27
Market Capitalization	\$18.13B
52-Week Range	\$28.14 – 36.34
Beta	0.41
EPS	\$1.05

Market summary data as of 9/15/2014

### RELATIVE PRICE PERFORMANCE - LTM



### INVESTMENT THESIS

- Well positioned to take advantage of: growing demand for animal protein and increasing pet ownership
- Market is discounting their ability to succeed as an independent entity given its short history and unproven operational capabilities.

# SECTOR GAME PLAN

**LOOK TO COMPLIMENT  
CURRENT BIOTECH**

Early stage biotechs with innovative platforms to take on pharma-into-biotech M&A theme

**INVEST IN NATURAL  
HEDGE TO ADDRESS  
CURRENT WEAKNESSES**

Generic drug manufacturers provide a good hedge against the war on prices as well as biosimilar encroachment

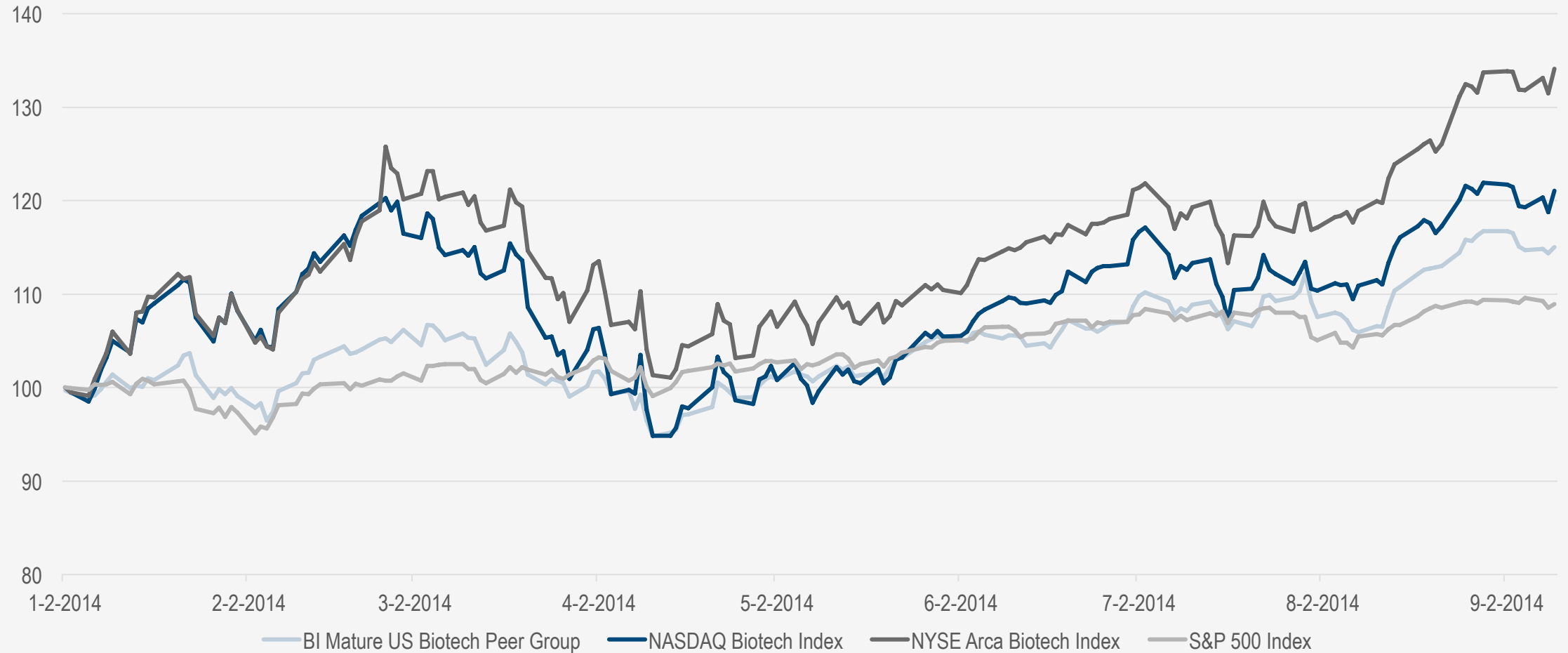
**SOMETHING BEYOND  
DRUGS FOR A CHANGE...  
HEALTHCARE SERVICES**

Focus tends to be on drugs when the sector has much more to offer... Either as a hedge to current holdings or as an unrelated investment

# THE BIOTECH COMEBACK

# YTD PRICE APPRECIATION

## WHAT IS DRIVING THE REBOUND?



# BIOTECH BULLS

## THEMES FUELING BIOTECH BOUNCE BACK

### FDA INTERCHANGEABILITY DESIGNATION

- US FDA has authority to deem a biosimilar as “interchangeable” with original branded drug
- Currently under review: guidelines on how to establish the interchangeability designation
- A high clinical bar that calls on extensive R&D would make biosimilar encroachment less of a threat to biotech

### BREAKTHROUGH THERAPY DESIGNATION

- In July 2012, the FDA created the Breakthrough Therapy Designation to accelerate development of new drugs for difficult-to-treat critical illnesses
- As more companies master the BTD process and submit applications, a new status quo in drug approval timelines may emerge

### M&A: PHARMA DIPPING INTO BIOTECH

- Large pharma companies viewing biotech as a discovery engine is leading to competitive licensing and M&A deals
- Catalyst for pipeline reassessments across early-stage biotechs with innovative platforms

DATE	TARGET	ACQUIRER	TOTAL VALUE	PREMIUM TO 1-MONTH AVG PX
8/24/2014	InterMune	Roche Holding	\$7,808	54%
4/23/2012	Ardea Biosciences	AstraZeneca	\$1,123	51%
4/19/2012	Human Genome Sciences	GlaxoSmithKline	\$3,013	84%
6/30/2010	Abraxis BioScience	Celgene	\$2,733	23%
3/1/2010	OSI Pharmaceuticals	Astellas Pharma	\$3,259	61%
2/28/2010	EMD Millipore	Merck KGaA	\$6,806	42%



# BIOTECH BEARS / GENERIC BULLS

## CASE STUDY 1: THE DRUG PRICING WAR

### RENEWED LIFE INTO DEBATE

Gilead's Hep. C drug Sovaldi has raised wider concerns about sustainability of US drug pricing

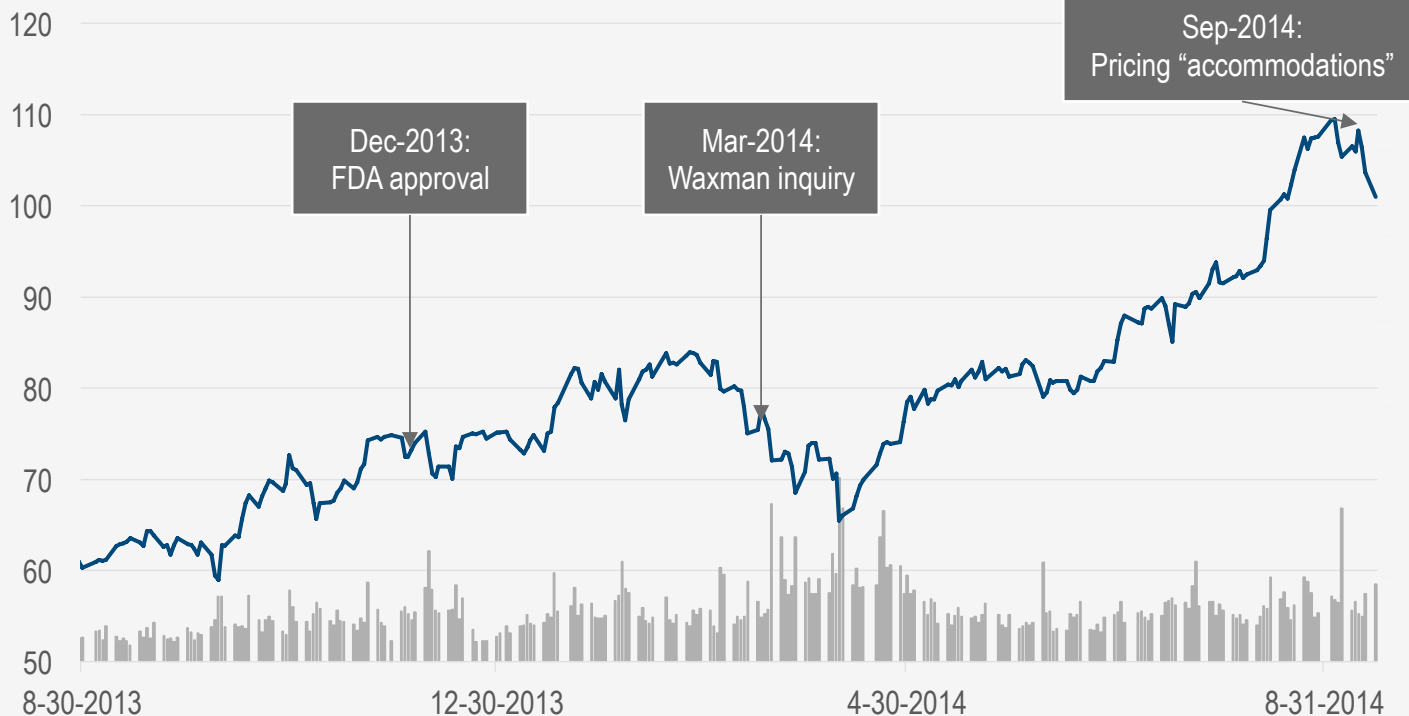
### OUTCOME

US pricing will remain as is; agreed to sell lower-cost version to India in collaboration with 7 Indian generics producers

### IMPACT FOR CUBIST

Minimal revenue growth attributed to price gains, but will continue to monitor

### GILEAD IS LIKELY NOT THAT UPSET



# BIOTECH BEARS / GENERIC BULLS

## CASE STUDY 2: BIOSIMILAR BATTLE

### BTD DESIGNATION

BTD is new on the FDA landscape and companies can take advantage of it

### SANOFI GOT BIT

Sanofi's Lovenox US market share has rapidly eroded since generic Enoxaparin was introduced in 2010

### IMPACT FOR CUBIST

Modeled similar decline pattern for Cubicin

### LOVENOX US SALES AS A % OF TOTAL US ENOXAPARIN SALES



# MINI-PITCH 1: PHARMACYCLICS

## TAPPING THE BTD MARKET

### FIRST TO MARKET

Imbruvica is first in a wave of new oral agents to treat leukemias/lymphomas...  
Not to mention 3 BTDs!!!

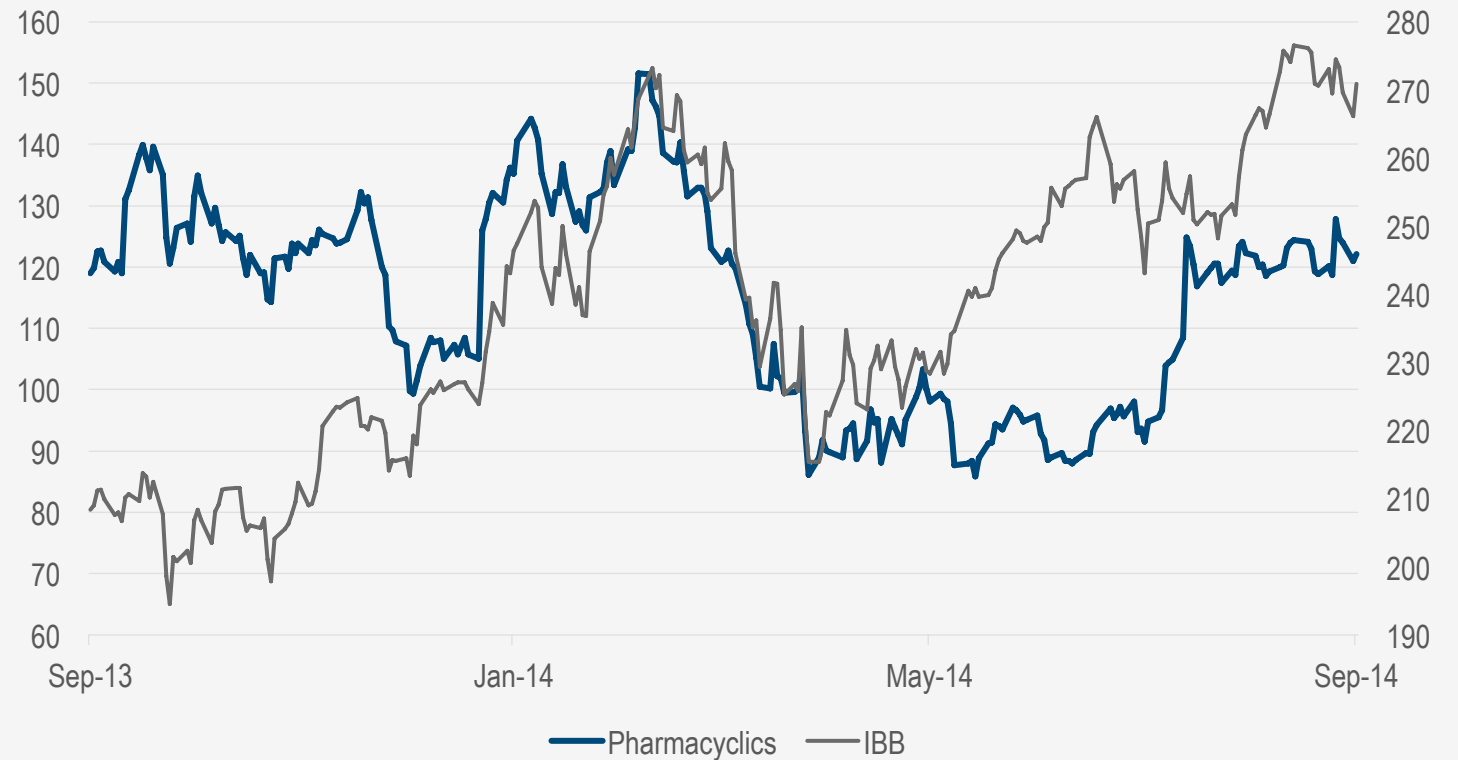
### BIG CONTRACTS

Recent spike in share price after being awarded Dept. of Veterans Affairs contract for up to \$3.81B

### MARKET SUMMARY

Share Price	\$122.91
Market Capitalization	\$9.3B
Beta	1.23

### 1Y PRICE – CRASHED IN-LINE BUT DIDN'T RECOVER IN-LINE



NOTE: not normalized for illustrative purposes

# HEALTHCARE SERVICES: SUPPLY CHAIN

# PHARMACOECONOMICS 101

## A CRASH COURSE ON DRUG REIMBURSEMENT AND WHY IT MATTERS

### DRUG REIMBURSEMENT

- Drug reimbursement is determined via cost-benefit analysis of a drug
- Heavily influenced by private insurers, governments, and healthcare organizations

### THE POWER OF A PBM

- Pharmacy Benefit Managers represent insurance companies in the manufacturer – pharmacy relationship
- By representing a large number of “lives” they’re able to leverage buyer power and negotiate rebates

#### TIER 1

Lowest member copayment: includes generic drugs

#### TIER 2

Reduced member copayment: includes selected branded products that are more cost-effective than similar drugs

#### TIER 3

Highest member copayment: includes all covered branded products

BlueCross BlueShield of Tennessee Essential Formulary, February 2014

# PHARMACY BENEFIT MANAGERS

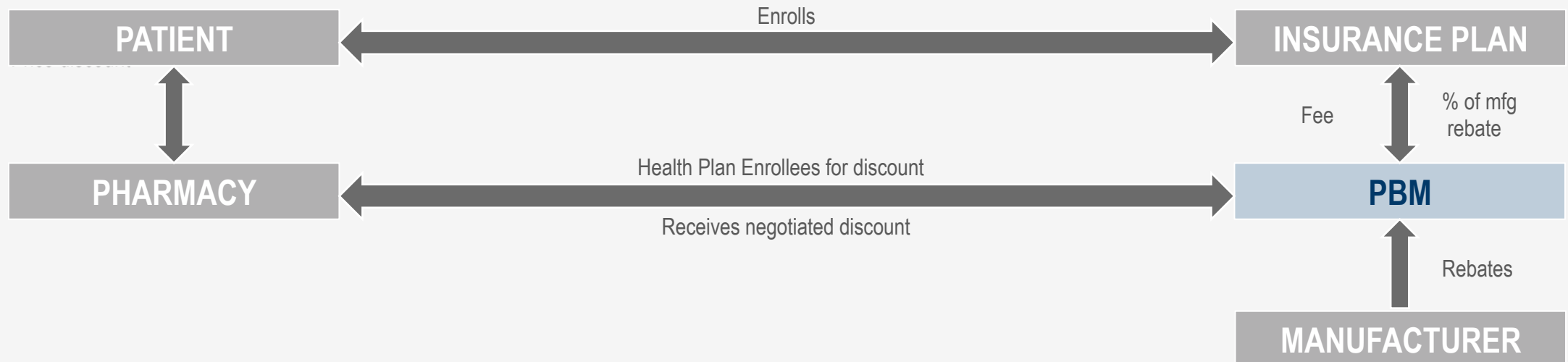
## WHERE LIVES ARE LEVERAGED FOR MONEY

### POSITIVE DRIVERS

- Increased pharmaceutical spending going forward
- Rising insurance coverage
- Aging population

### RISKS

- Increased transparency to erode margins
- Move from branded to generics
- Bypass PBM



# PHARMACY BENEFIT MANAGERS

## WHERE LIVES ARE LEVERAGED FOR MONEY

*(as of 9/15/2014)*

COMPANY	MARKET CAP. (B)	ENTERPRISE VALUE (B)	EV/EBITDA LTM	P/E	ROE	MARKET SHARE (REV)
Express Scripts	\$55	\$61	11.3x	24.9x	8%	41%
Cigna	\$25	\$24	6.7x	13.2x	20%	1%
CVS Health	\$95	\$107	9.4x	20.3x	13%	36%
UnitedHealth	\$85	\$94	8.0x	16.0x	17%	13%
Catamaran	\$10	\$11	13.0x	34.4x	6%	9%
<b>Average</b>			<b>9.7x</b>	<b>21.8x</b>	<b>13%</b>	

# MINI-PITCH 2: EXPRESS SCRIPTS

## PBMS AND THE POWER OF PEOPLE

### COMPANY DESCRIPTION

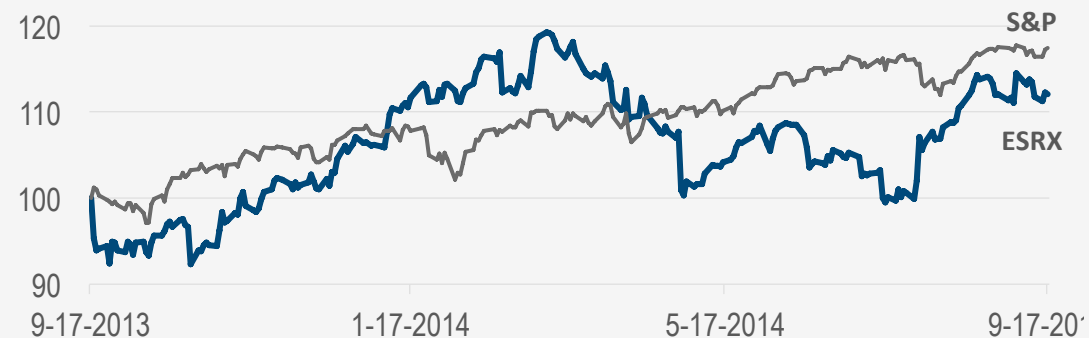
- Full service pharmacy benefit management and specialty managed care company
- Largest player in the PBM industry
- Customers: managed care organizations, insurance carriers, third part administrators, employers and unions

### MARKET SUMMARY

Share Price	\$73.90
Market Capitalization	\$55.1B
52-Week Range	\$59.20 – 79.37
Beta	0.79
EPS FY2014E	\$4.88

Market summary data as of 9/15/2014

### RELATIVE PRICE PERFORMANCE - LTM



### INVESTMENT THESIS

- Being the market share leader allows them to leverage their buyer power and negotiate better discounts for insurers
- First to come out with “exclusion list” that is expected to generate over \$1B in savings in 2015



# MINI-PITCH 2: EXPRESS SCRIPTS

## 2015 PREFERRED DRUG LIST EXCLUSIONS

Drug Class	Excluded Medications	Preferred Alternatives
<b>AUTONOMIC &amp; CENTRAL NERVOUS SYSTEM</b> Interferon Beta Medications for Multiple Sclerosis	Betaseron	Avonex, Extavia, Rebif
Long-Acting Opioid Oral Analgesics	Kadian, Zohydro ER	morphine sulfate ER, oxymorphone ER, Nucynta ER, Opana ER, Oxycontin
Transmucosal Fentanyl Analgesics	Abstral, Fentora, Subsys	fentanyl citrate, Lazanda
Triptans	Axert, Frova	rizatriptan, sumatriptan, zolmitriptan, Relpax

“Take action to avoid paying full price. If you are currently using one of the excluded medications, please ask your doctor to consider writing a new prescription for one of the following preferred alternatives.”

# HEALTHCARE SERVICES: INSURANCE

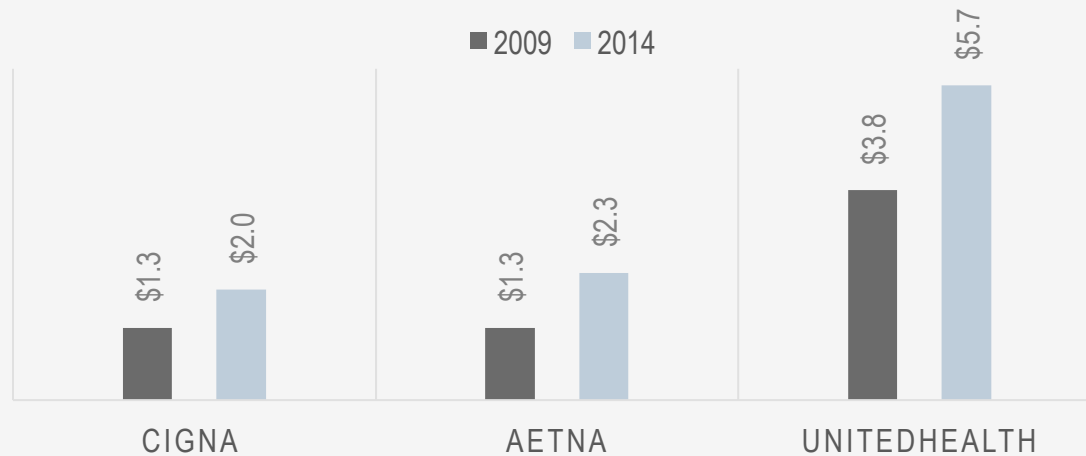
# REVIEW: PUBLIC EXCHANGES

## AN ONLINE MARKETPLACE FOR INSURANCE COMPANIES

### POSITIVE DRIVERS

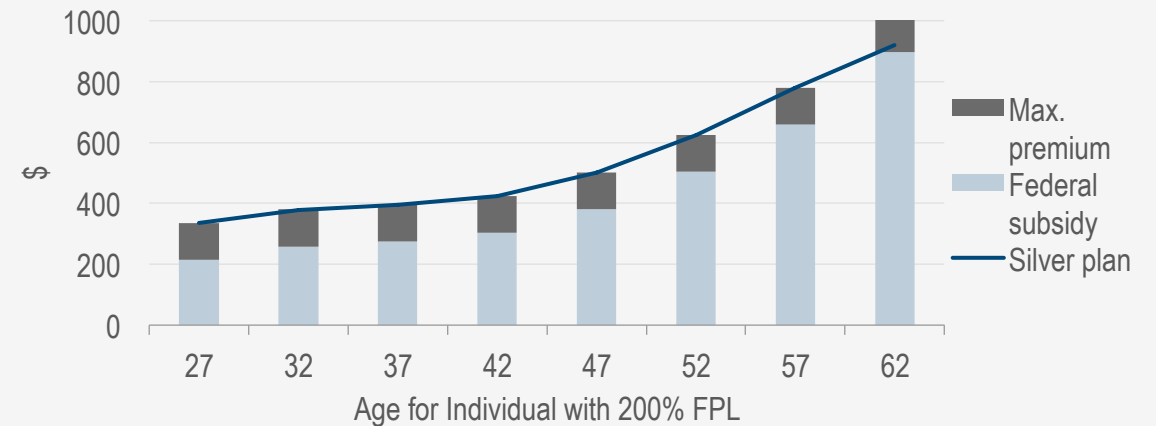
- Individuals must purchase qualified health insurance under ACA
- Massive earnings growth

NET INCOME PREDICTION (\$B)



### RISKS

- Increase competition in the industry under ACA
- Insurers will no longer be able to decline coverage to individuals with preexisting medical conditions under ACA
  - More expensive demographic to insure



# MINI-PITCH 3: AETNA

## MOMENTUM EXPOSURE TO GROWTH INDIVIDUAL INSURANCE SEGMENT

### COMPANY DESCRIPTION

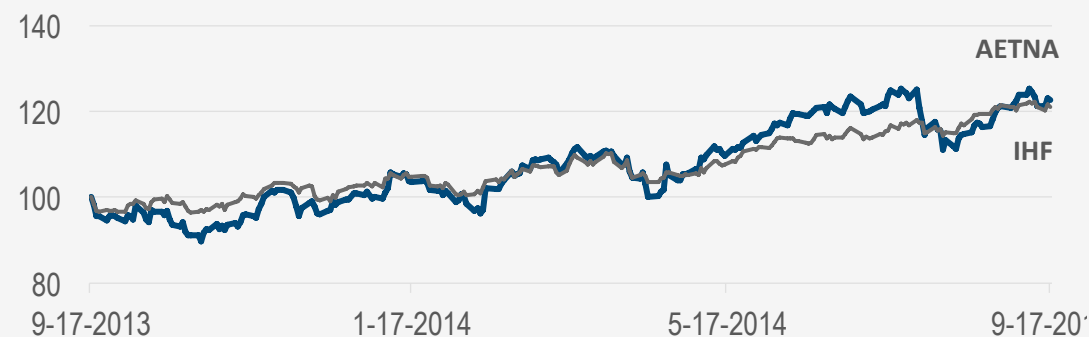
- Operates a diversified healthcare benefits company in the United States Operates in three segments:
- Main segments: Health Care, Group Insurance, and Large Case Pensions
- 3th largest commercial HMO

### MARKET SUMMARY

Share Price	\$83.15
Market Capitalization	\$29.5B
52-Week Range	\$60.32-85.72
Beta	0.84
EPS FY2014E	\$6.59

Market summary data as of 9/15/2014

### RELATIVE PRICE PERFORMANCE - LTM



### INVESTMENT THESIS

- Expected to benefit from synergies as a result of recent merger agreement with Coventry
- Expected increase in membership enrollment from its Commercial and Government business
- Sophisticated capital management strategy

# WHO'S GETTING RICH OFF OBAMACARE

## BIG PLAYERS IN HMO SPACE

*(as of 9/15/2014)*

COMPANY	MARKET CAP. (B)	ENTERPRISE VALUE (B)	EV/EBITDA LTM	P/E	ROE	P/FCF
Wellpoint	\$33	\$25	4.1x	14.6x	9%	10x
Cigna	\$25	\$25	6.7x	13.2x	20%	14x
Aetna	\$29	\$33	7.0x	13.4x	15%	9x
UnitedHealth	\$85	\$107	8.0x	16.0x	17%	16x
<b>Average</b>			<b>6.5x</b>	<b>14.3x</b>	<b>15%</b>	<b>12x</b>

**“THE ART OF MEDICINE  
CONSISTS OF AMUSING  
THE PATIENT WHILE  
NATURE CURES THE  
DISEASE”**

**- VOLTAIRE**

# APPENDIX

# HEALTHCARE WATCH LIST

## LET'S MAKE SOME MONEY

### MOLINA HEALTHCARE

Insurance company targeting Medicaid expansion under Affordable Care Act

### OREXIGEN-TAKEDA

Obesity pill Contrave: much disputed and much awaited FDA approval recently granted

### MEDTRONIC

Diversified medical devices company with a robust pipeline composed of +200 planned projects

### BIOGEN

Stable base-business with no near-term patent combined with recently launched Tecfidera (\$4B+ in potential peak sales)



# BTD DESIGNATION

## IMPACT ON FDA APPROVAL TIMELINES AND FORECASTING

Drug	BTD Grant Date	Filing Date	Approval Date	Review Time
Zykadia	Mar-2013	Dec-2013	Apr-2014	4 months
Imbruvica MCL	Feb-2013	June-2013	Nov-2013	5 months
Imbruvia CLL	Apr-2014	June-2013	Feb-2014	8 months
Sovaldi	Oct-2014	Apr-2013	Dec-2013	8 months
Arzerra	Sept-2013	Oct-2013	Apr-2014	6 months