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ZS Pharma (ZSPH, Outperform, $51 TP)

"High-Class Spec Pharma Company with Attractive Proprietary Ion-Trap Technology"

July 14, 2014

RESEARCH TEAM

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- **Initiating coverage of ZS Pharma with an Outperform rating and $51 target price.** We view ZS Pharma as a high-class specialty pharma that is well positioned to deliver strong long-term growth by developing novel drugs from their proprietary "ion-trap" technology, most notably ZS-9 for treatment of hyperkalemia (high potassium). The company is led by a management team with strong industry experience and post IPO is well capitalized to execute on its wholly-owned asset. Several catalysts are also in place that should drive further investor interest.
- **Investment positives include:** (1) Compelling potential of lead late-stage asset ZS-9 in hyperkalemia; (2) Robust long-term double-digit growth outlook; and (3) Attractive risk/reward profile for upcoming catalysts.
- **Investment risks include:** (1) Pipeline setbacks, specifically with ZS-9; (2) slower-than-expected market growth for novel anti-hyperkalemia agents; and (3) slower-than-expected uptake of ZS-9 specifically following an expected 2016 launch.
- **Catalysts**: (1) ZS-9 – ZS004 phase 3 data readout; current study ongoing to establish a maintenance dose (4Q '14); (2) ZS-9 – Expected US and EU submission (1H 2015); (3) Read-through from RLYP's patiromer potential launch (2H 2015); (4) Possible ex-US licensing.
- **Valuation:** Our $51 target price is based on DCF valuation. We use a 11.5% WACC and forecast discounted cash flows through 2033, with no terminal value thereafter.

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Table of Contents (Click on Titles to Navigate Through Note)

Financial Statements

Portfolio Manager's Summary

Company Background

Product Story

Valuation

Catalysts

Investment Risks

CREDIT SUISSE

Portfolio Manager's Summary

"High-Class Spec Pharma Company with Attractive Proprietary Ion-Trap Technology"

The authors of this report wish to acknowledge the contribution made by Selvakumar Nallasamy, an employee of CRISIL Global Research and Analytics, a business division of CRISIL Limited. CRISIL Limited is a third-party provider of offshore research services to Credit Suisse.

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High-Class Company Developing Drugs with Novel Ion Trap Technology

- **Led by senior management team with deep industry expertise**
- **Main late-stage asset ZS-9 poised for growth given impressive efficacy and safety profile**
  - Successfully completed phase 2 and initial phase 3 study for use in broad group of patients with hyperkalemia
    - Potent, consistent efficacy along with very reasonable safety profile
    - Second phase 3 study (ZS004) ongoing, with expected readout in 4Q 2014
  - Potential NDA submission to the FDA in early 2015 and US approval/launch in 2016
  - We assume total peak revenues of ~$1Bn in 2030; loss of exclusivity in 2033
    - Expect independent commercialization in the US with specialty sales force, which should drive substantial operating leverage
    - Ex-US licensing providing opportunity for incremental revenues; 1H 2017 launch target in EU
- **Near-term catalysts should drive investor interest and generate value**
  - **4Q 2014:** ZS-9 – ZS004 phase 3 data readout; current study ongoing (n = 275) to establish a maintenance dose
  - **1H 2015:** ZS-9 – Expected US and EU submission
- **Key risks include clinical setbacks, poor commercial execution, and earlier-than-expected generic competition**
- **Relypsa (RLYP) provides direct comparable for ZSPH**
  - RLYP also developing a drug for hyperkalemia (called patiromer)
    - Could come to US market in 2H 2015 (NDA submission in 3Q 2014), roughly 6-9 months **before** ZS-9
  - RLYP went through an IPO in November 2013, now with a ~$820 million market cap
  - **We believe ZS-9 has a stronger overall profile than patiromer based on better efficacy/safety profile, more convenient once-daily dosing and ability to be stored at room temperature**

Source: Company data, Thomson One, Credit Suisse estimates and analysis

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CS View on Main Controversies Surrounding ZSPH Shares

Controversy	Bull Case	Bear Case	CS View
Total addressable market for novel hyperkalemia products	Market potential for the novel agents could be more meaningful than currently expected given the aging population, the increased incidence conditions that lead to hyperkalemia and the limitations current treatment options.	Hyperkalemia market size might not be as large as some thought and it will take longer to build than investors realize. Physician familiarity with current treatment options such as with Kayexlate will take a long time to overcome.	 We believe there is more upside risk rather than downside risk on current market assumptions given the unmet medical need that exists in the growing hyperkalemia market and the limitations of current treatment options.
Competitive potential of ZS-9 in the hyperkalemia market	Strong efficacy, safety/tolerability and convenience advantages should allow for ZS-9 to becoming the market leader in the hyperkalemia market. Peak sales for ZS-9 could reach ~$1.5 billion assuming higher probability of success, strong pricing, higher patient penetration, and/or longer treatment duration.	ZS-9 is likely to post positive data in the ZS004 study but RLYP's patiromer will have the first mover advantage in gaining traction in the emerging hyperkalemia market. Questions around chronic use of ZS-9 and long-term safety could also limit ZS-9 upside, keeping peak sales in the ~$600 million range.	 We again are more bullish on the competitive potential of ZS-9 given a broad clinical dataset including all comers with hyperkalemia and more than 1,500 patients being exposed to the product in the company's rigorous development program. Relypsa's first-mover advantage is less important in this market that will take some time to develop, in our view. We assume a 2016 launch and probability-adjusted 2030 sales of ~$1billion
Pipeline opportunities for ZSPH	While the company has not disclosed much in terms of pipeline opportunities, the ion-trap technology has a strong rationale for use in areas such as hyperammonemia, which provides reason for longer-term upside.	Lack of compelling near-term pipeline opportunities a weakness to the ZSPH story, limiting longer-term valuation. Estimates.	 While we do see some potential for ZSPH's technology to have applications in other diseases, we currently do not assign any value to any pipeline opportunities beyond ZS-9.
2018-2025 Sales CAGR	21%	14%	 18%
Valuation	$86	$27	 $51

Source: Company data, Credit Suisse estimates and analysis

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DCF-Derived Target Price Suggests ZSPH Is Worth $51/Share

DCF valuation: $51/share

- Key assumptions driving DCF valuation
  - DCF best captures the evolution of ZSPH's long-term outlook
  - We project cash flows through 2033, with no terminal value thereafter
  - WACC: 11.5% (higher than U.S. major pharma and large specialty pharma)

Valuation Snapshot

WACC	DCF/Share
9.5%	$63
10.5%	$57
11.5%	**$51**
12.5%	$46
13.5%	$42

Source: Company data, Credit Suisse estimates and analysis

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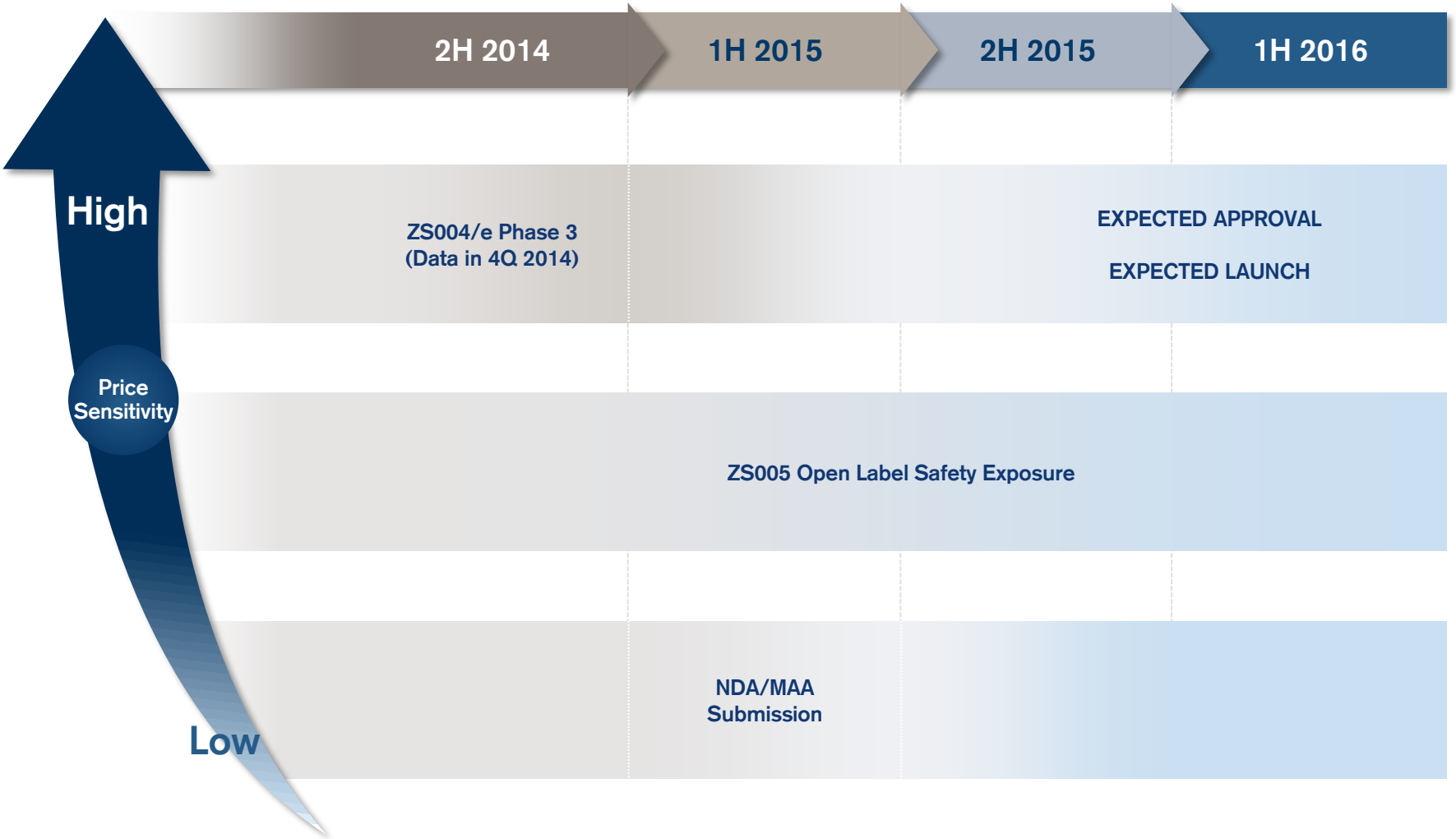
ZS004 Data and ZS-9 Submission/Approval Key Upcoming Catalysts



Sources: Company data, Credit Suisse estimates, Bloomberg, TORA

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Several Factors Pose Downside Risk to Our $51 Target Price

- **Clinical development setbacks could materially impact ZSPH's path to profitability**
  - We see high likelihood that ongoing second phase 3 study (ZS004) will deliver positive results based on ZS-9 data to date
  - Success of ZS-9 especially important in the ZSPH story given lack of other compounds in advanced clinical development

- **Poor commercial execution in an immature market and in the face of a direct competitor could limit uptake of ZS-9**
  - Branded hyperkalemia market will also need to be successfully developed (by both ZSPH and RLYP) given lack of novel branded products into this market for many years
  - Direct competitor Relypsa (RLYP) likely to beat ZSPH to the market by 6-9 months and could take significant share

- **Continued questions around long-term safety of zirconium could limit use, especially in the more lucrative chronic setting**
  - ZSPH data highlights daily exposure to zirconium from the diet much greater than amount released from therapeutic doses of ZS-9

- **Earlier-than-expected generic competition could limit long-term potential of ZS-009 and growth trajectory of ZSPH as an entity**
  - Current patent estate should protect product through 2033
  - We believe extensive manufacturing scale and knowhow needed to produce ZS-9 will also limit the entry of generic competitors

Source: Company data, Credit Suisse estimates and analysis

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ZS Pharma (ZSPH, Outperform, $51 TP)

"High-Class Specialty Pharma Company with Attractive Proprietary Ion-Trap Technology"

Investment Thesis

- **Compelling potential of lead asset ZS-9** in hyperkalemia indication
- **Robust long-term double-digit growth outlook**
- **Attractive risk/reward profile for upcoming catalysts**

Catalysts

- (1) ZS-9 – ZS004 phase 3 data readout; current study ongoing to establish a maintenance dose (4Q '14); (2) ZS-9 – Expected US and EU submission (1H 2015); (3) Read-through from RLYP's patiromer potential launch (2H 2015); (4) Possible ex-US licensing.

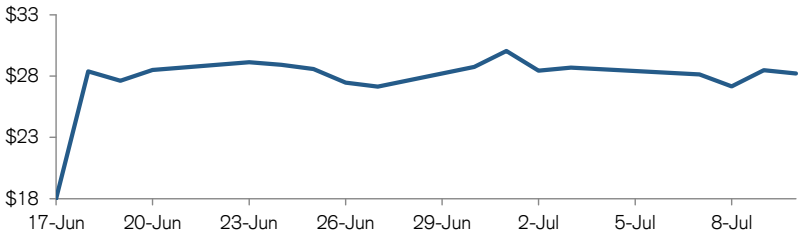
Risks

- 1) Pipeline setbacks, specifically with ZS-9; (2) slower-than-expected market growth for novel anti-hyperkalemia agents; and (3) slower-than-expected uptake of ZS-9 specifically following an expected 2016 launch

Valuation

- 100% DCF, with projected cash flows through 2033. We use 11.5% WACC and assume no terminal value beyond 2033

ZS Pharma Stock Price



CS PharmaFilter

Valuation

ZS Pharma (ZSPH)

Current Price (Jul 10)	$28.21	Market Cap ($ mm)	$562
% of 52-Week High	*92%*	Enterprise Value ($ mm)	$639
Target Price	$51	Short Interest (Days)	0.6
Upside / Downside (%)	*81%*		

Credit Suisse Estimates vs. Consensus

Fiscal Year Ending December 31 ($ in thousands, except per share data)

ADMS	FY 2014		FY 2015		FY 2016		FY 2017	
	EPS	Sales	EPS	Sales	EPS	Sales	EPS	Sales
CS Estimates	($1.82)	$0	($2.82)	$0	($0.36)	$117,874	($0.04)	$176,804

Source: Company data, Thomson One, Credit Suisse estimates and analysis

Product Story

ZS-9 Poised to Play an Important Role in Underappreciated Hyperkalemia Market

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Table of Contents (Click on Titles to Navigate Through Note)

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ZS-9 has Potential to be a Best-in-Class Treatment

- **Unique zirconium silicate compound**
  - Selectively binds to potassium (not calcium or magnesium)

- **10x the binding capacity of current standard of care (Kayexalate)**
  - Kayexalate also has unpredictable efficacy, causes significant GI side effects and has FDA warning for risk of colonic necrosis

- **Consistent results in ZS-009 studies to date**
  - ZS002 (phase 2) met primary endpoint for lowering potassium within 48 hours
  - ZS003 (phase 3) met primary endpoint for lowering potassium within 48 hours (induction phase) and maintaining normal potassium levels for two weeks (maintenance phase)
  - **ZS004 (phase 3) ongoing**
    - **Results expected in 4Q 2014 – Key upcoming catalyst**
    - Goal is to establish maintenance dose to allow for both chronic and acute indication in product label
  - Longer-term safety studies also being conducted (ZS004e, ZS005)
    - ~1300 subjects will be exposed to ZS-9 at the time of NDA submission, with 1500+ patients exposed by time of approval
  - **Conversations with physicians also highlight the excitement that exists for a product with ZS-9's profile**

- **CS assumes ZS-9 filing in 1H 2015 with 2016 US launch and 2017 EU launch**
  - Assume 80% probability of regulatory success
  - Probability-adjusted peak US sales of ~$933 million and total company sales of ~$1 Bn in 2030
  - Non-probability adjusted peak global product sales potential of ~$1.7 billion in 2030
    - CS assumes ex-US opportunity will be done through a partner with ZSPH receiving a ~15% royalty on sales

Source: Company data, Credit Suisse estimates and analysis

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ZS-9 Poised to Play an Important Role in Underappreciated Hyperkalemia Market

- **Hyperkalemia (high potassium) is a life-threatening condition defined by elevated levels of potassium (K+) in the blood**
  - Generally affects patients with chronic kidney disease, heart failure, high blood pressure and/or diabetes
    - Also exacerbated by some of the best drugs that we have available to treat some of these conditions (RAAS inhibitors)
  - Hyperkalemia can lead to cardiac events (arrhythmias, heart failure) and death
  - Current treatment options (diet, medication avoidance, Kayexalate, diuretics) limited by efficacy, safety or tolerability issues

- **Hyperkalemia market underappreciated given lack of branded treatment options**
  - Four million patients with hyperkalemia in the US currently
  - Incidence of conditions that lead to hyperkalemia (diabetes, chronic kidney disease and heart failure) all on the rise

Source: Company data, Credit Suisse estimates and analysis

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Large Potential Addressable Market with Clear Need to Provide Room for Both ZSPH's ZS-9 and RLYP's Patiromer

- **Branded hyperkalemia market will need to be successfully developed (by both ZSPH and RLYP) given lack of new products into this market for many years**

- **Total addressable market (TAM) for chronic population estimated to be 2.5-3.0 million patients**
  - We believe this estimate may prove to be conservative given ZS-9's broad clinical dataset that includes all comers of hyperkalemia (CKD, HF, diabetes, RAAS inhibitors, etc)

- **ZS-9 will likely also have access to the acute (hospital) population over time**
  - ZS-9 demonstrated better time of onset data (similar drop at 4 hours compared to RLYP's patiromer drop at 48 hours)
  - Incremental ~2 million patients but ZSPH has stated it will initially focus their commercial efforts on the outpatient, specialist setting
    - Acute market could represented longer-term upside

Source: Company data, Credit Suisse estimates and analysis

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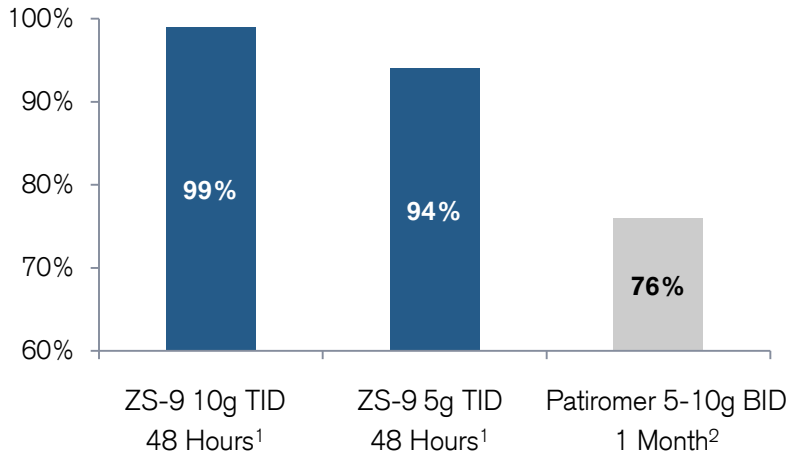
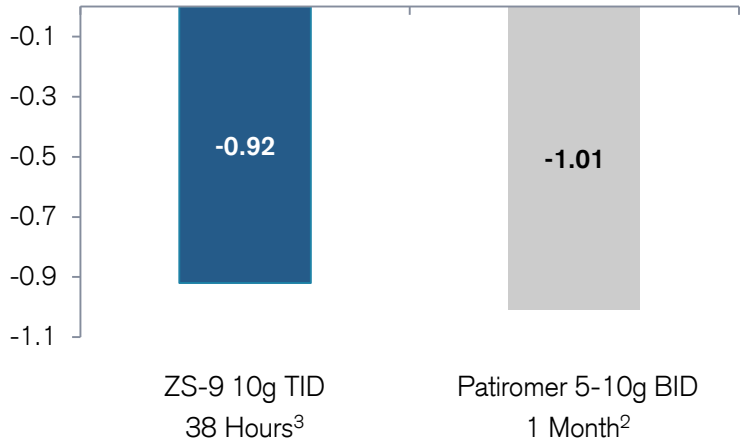
ZS-9 Provides Efficacy, Safety and Convenience Benefits Over Relypsa's Patiromer

Efficacy

Percent Normokalemic

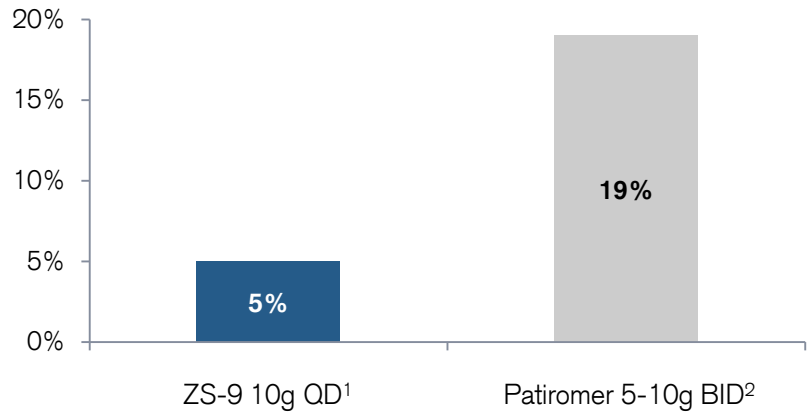


Decline in Serum Potassium



Tolerability

Gastrointestinal Adverse Events



Convenience

- Faster onset of action
- QD vs BID Dosing
- Room temperature vs cold chain storage
- Cost of goods
- Supply Chain flexibility

1. ZS Pharma ZS003 phase 3 data.
2. Relypsa pivotal phase 3 data part A.
3. ZS Pharma ZS002 phase 2 data

Source: Company data, Credit Suisse estimates and analysis

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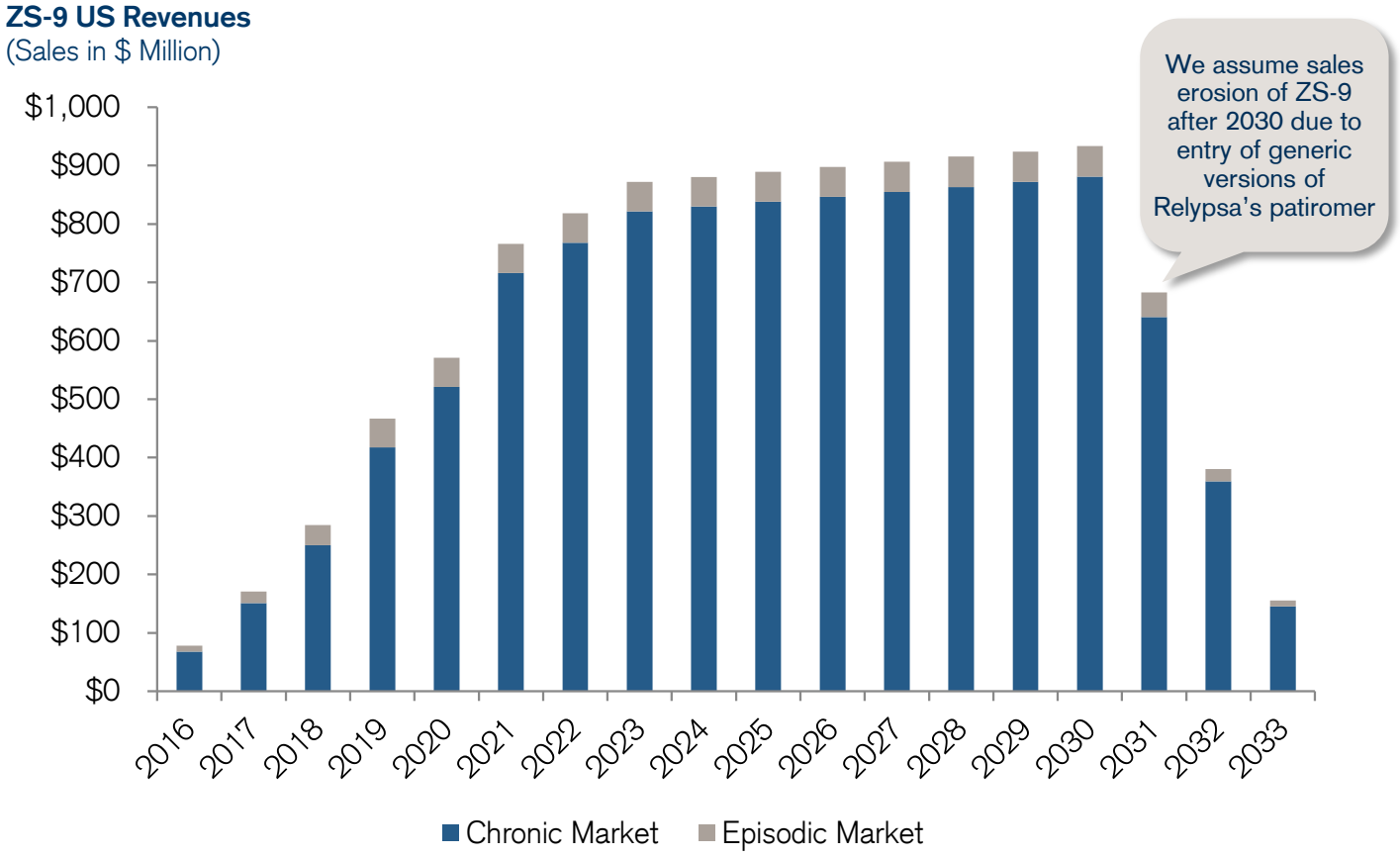
ZS-9 Launch Expected in 2016 With US Peak Sales of ~$933 Million Expected in 2030

ZS-9 US Revenues
(Sales in $ Million)



Source: Company data, Credit Suisse estimates and analysis

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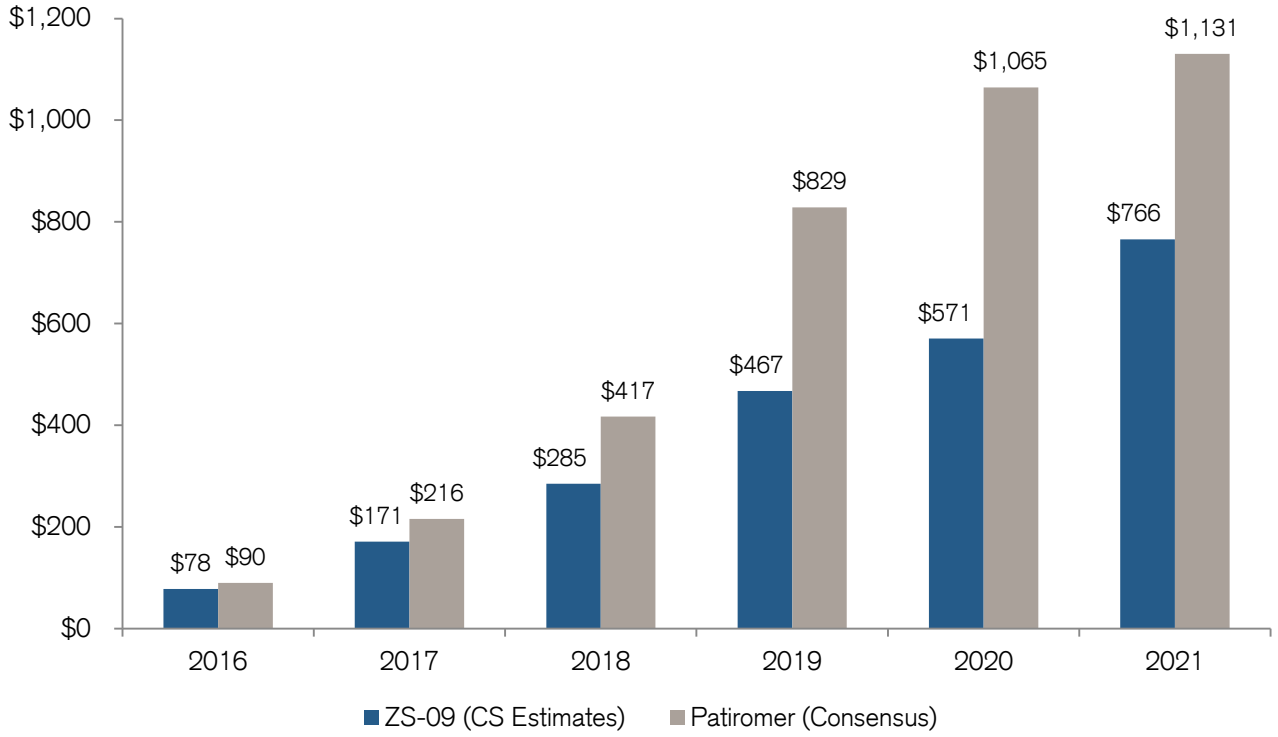
We are Conservative on ZS-9 Compared to Consensus Estimates for Relypsa's Patiromer

U.S. Revenue Estimates – ZS-9 vs. Patiromer [1]

(Sales in $ Millions)



[1] Since Patiromer is Relypsa's only product, total company sales is assumed to be Patiromer sales

Source: Company data, Bloomberg, Credit Suisse estimates and analysis

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ZS003 and ZS004 are the Pivotal Phase 3 Studies for ZS-9

Trial	Trial Type	Patient Population	Duration	Objective	Summary
ZS002 (Completed)	Double-blind RCT Phase 2	N=90 Hyperkalemia, CKD 5.0–6.0 mEq/L	48 hours	Proof of concept for ZS-9 rapidly lowering K^+ levels	Met primary endpoint for the 3 g and 10 g doses
ZS003 (Completed)	Double-blind RCT Phase 3	N=753 Hyperkalemia regardless of etiology 5.0–6.5 mEq/L	14 days	Confirm rapid K+ control and POC for maintenance dosing	Met primary endpoint for the 2.5g, 5g and 10g doses, and met secondary endpoint for 5g and 10g doses in maintenance phase
ZS004/e (Ongoing)	Double-blind RCT Phase 3	N=230 Hyperkalemia regardless of etiology >5.0 mEq/L	1 Month + Extension	Establish a maintenance dose	Ongoing; results expected in Q4 '14
ZS005 (Ongoing)	Open-label safety study	N=500 Hyperkalemia regardless of etiology >5.0 mEq/L	Up to 12 months	Establish long-term safety and efficacy	Enrollment start announced on June 26, 2014

Approximately 1,500+ Patients Will Be Exposed to Drug by Time of FDA Approval

Source: Company data, Credit Suisse estimates and analysis

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Catalysts

Several Catalysts Should Drive Investor Interest and Generate Value

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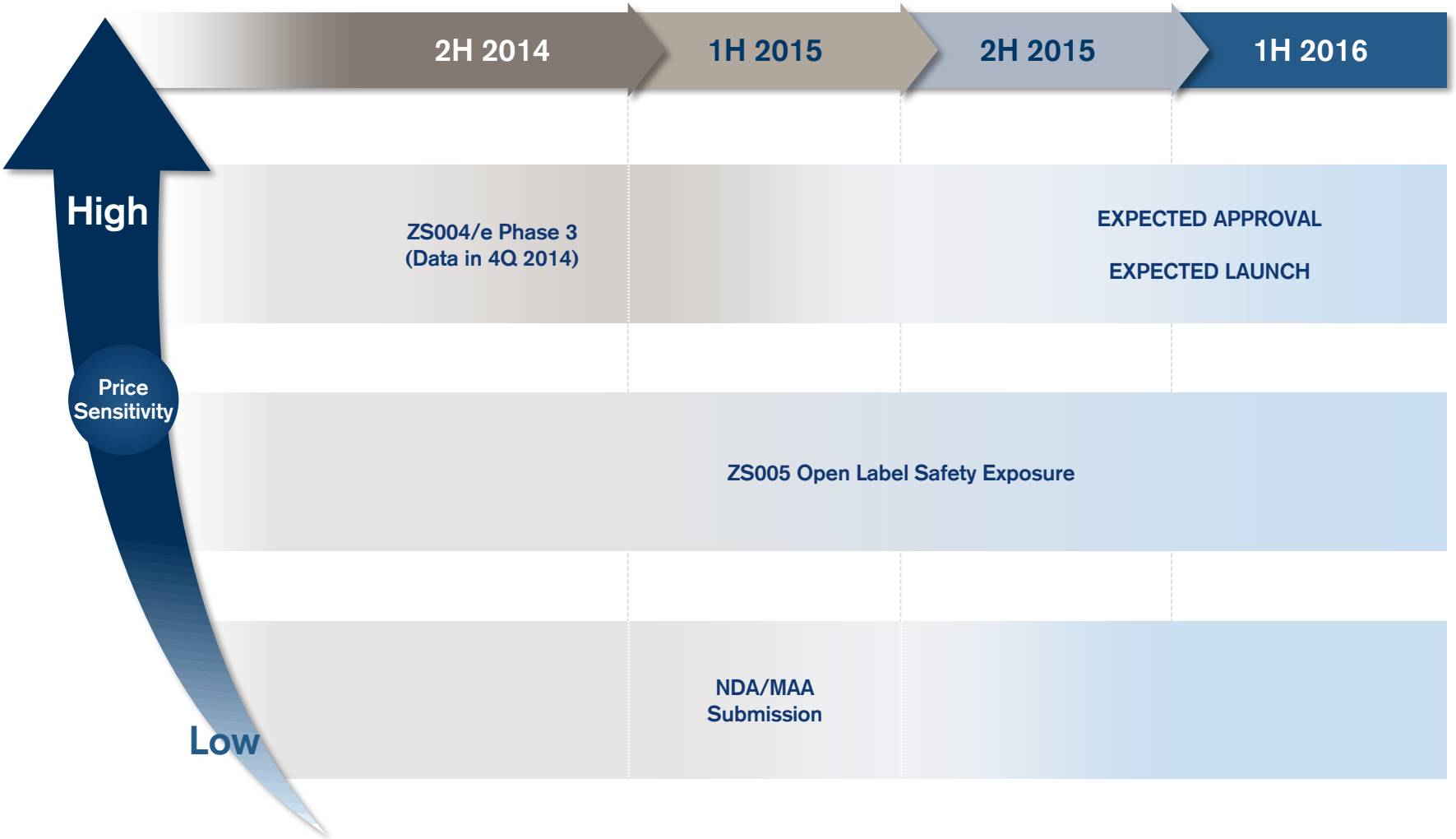
Table of Contents (Click on Titles to Navigate Through Note)

CREDIT SUISSE

ZS004 Data and ZS-9 Submission/Approval Key Upcoming Catalysts



Sources: Company data, Credit Suisse estimates, Bloomberg, TORA

Investment Risks

Several Factors Pose Downside Risk to Our $51 Target Price

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Table of Contents (Click on Titles to Navigate Through Note)

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Several Factors Pose Downside Risk to Our $51 Target Price

- **Clinical development setbacks could materially impact ZSPH's path to profitability**
  - We see high likelihood that ongoing second phase 3 study (ZS004) will deliver positive results based on ZS-9 data to date
  - Success of ZS-9 especially important in the ZSPH story given lack of other compounds in advanced clinical development

- **Poor commercial execution in an immature market and in the face of a direct competitor could limit uptake of ZS-9**
  - Branded hyperkalemia market will also need to be successfully developed (by both ZSPH and RLYP) given lack of novel branded products into this market for many years
  - Direct competitor Relypsa (RLYP) likely to beat ZSPH to the market by 6-9 months and could take significant share

- **Continued questions around long-term safety of zirconium could limit use, especially in the more lucrative chronic setting**
  - ZSPH data highlights daily exposure to zirconium from the diet much greater than amount released from therapeutic doses of ZS-9

- **Earlier-than-expected generic competition could limit long-term potential of ZS-009 and growth trajectory of ZSPH as an entity**
  - Current patent estate should protect product through 2032
  - We believe extensive manufacturing scale and knowhow needed to produce ZS-9 will also limit the entry of generic competitors

Source: Company data, Credit Suisse estimates and analysis

Valuation

We Assign a $51 12-Month Target Price to ZSPH Shares

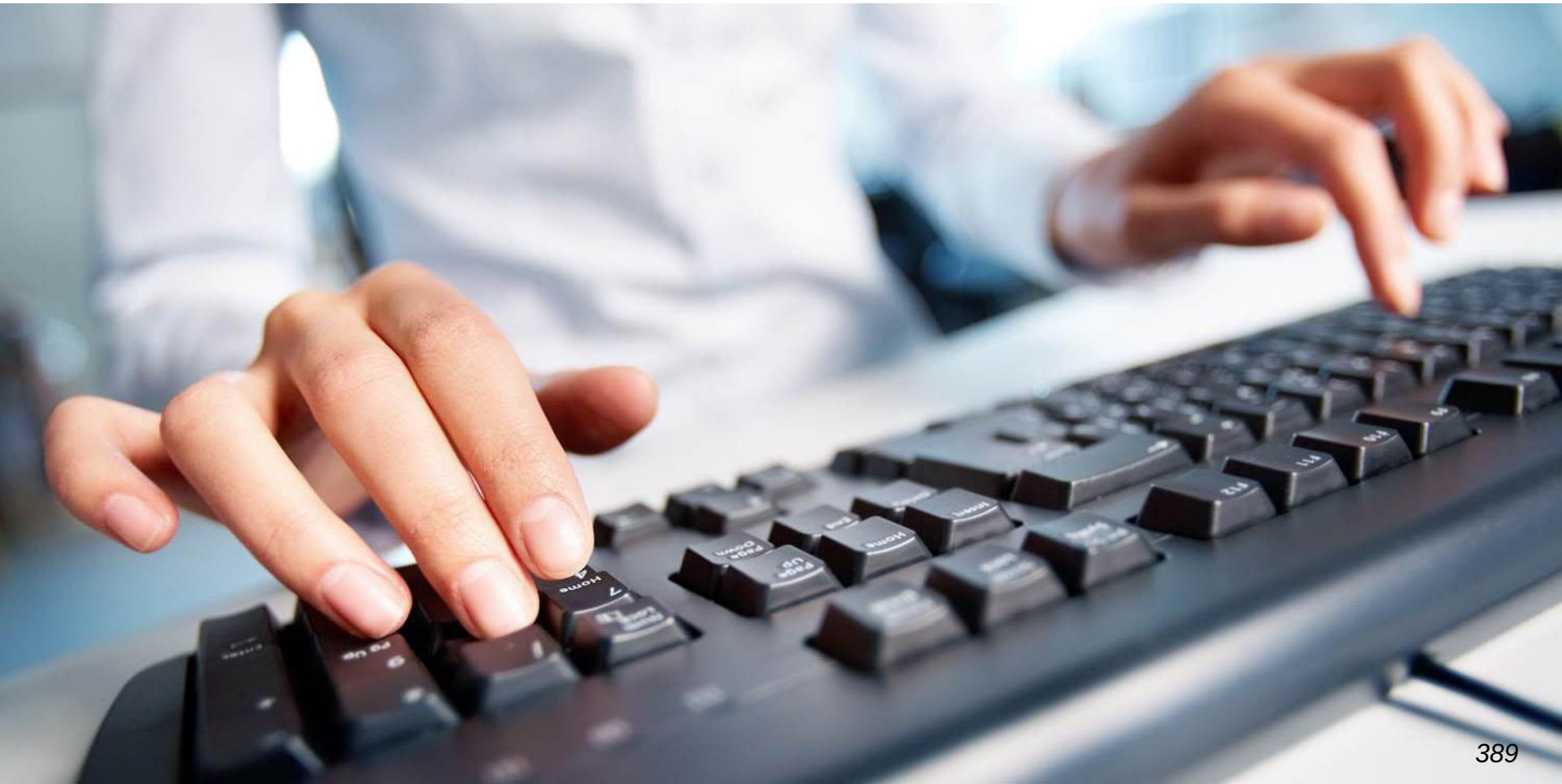

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Table of Contents (Click on Titles to Navigate Through Note)

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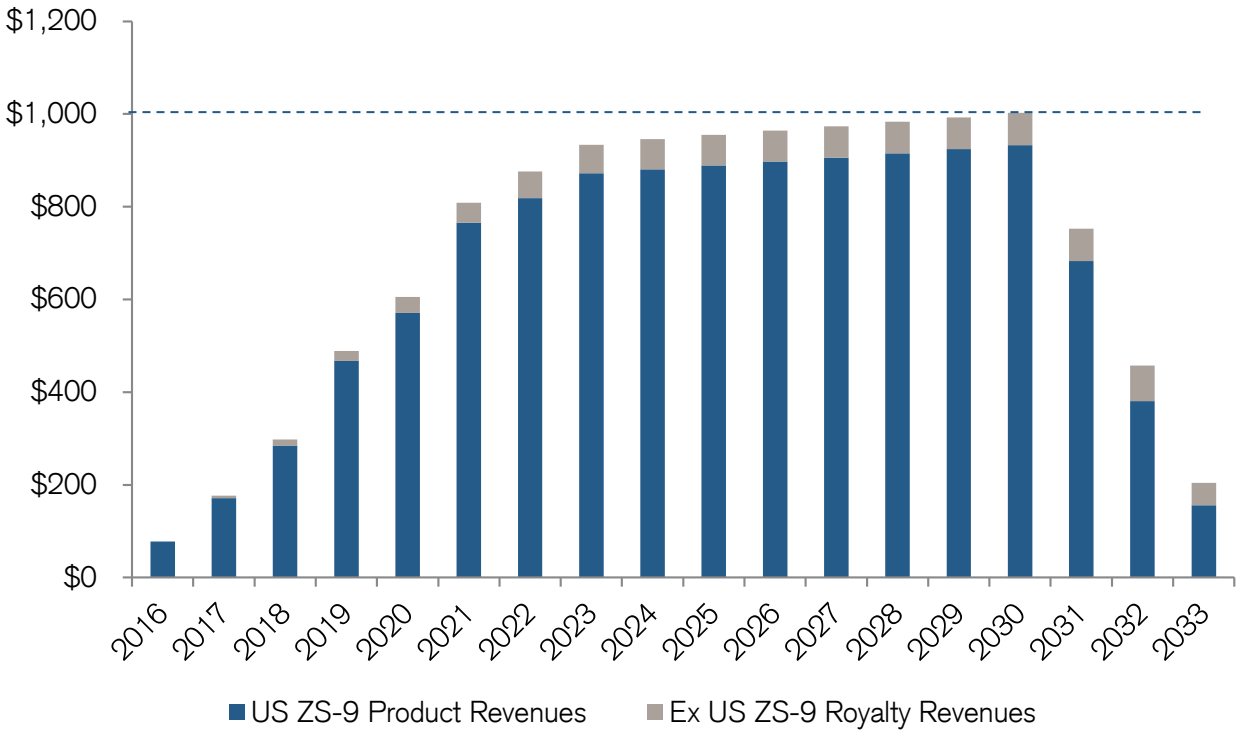
ZS-9 Key Driver of Long-Term ZS Pharma Estimates

ZS Pharma Revenue Breakup

(Sales in $ Millions)



Key Modeling Assumptions

- ZS-09 receives US FDA approval in 2016
  - Achieves peak US revenues of ~$1 Bn in 2030 (80% probability of success)
  - Assumes 12.5% penetration of total addressable market and $550/month net price
- ZS-09 expected to go off patent in 2033
- Ex US royalty of 15% from potential ex-US licensee
- We assume the company will reach positive EBITDA in 2017

Source: Company data, Credit Suisse estimates and analysis

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DCF-Derived Target Price Suggests ZSPH Is Worth $51/Share

DCF valuation: $51/share

- Key assumptions driving DCF valuation
  - DCF best captures the evolution of ZSPH's long-term outlook
  - We project cash flows through 2033, with no terminal value thereafter
  - WACC: 11.5% (higher than U.S. major pharma and large specialty pharma)

Valuation Snapshot

WACC	DCF/Share
9.5%	$63
10.5%	$57
11.5%	**$51**
12.5%	$46
13.5%	$42

Source: Company data, Credit Suisse estimates and analysis

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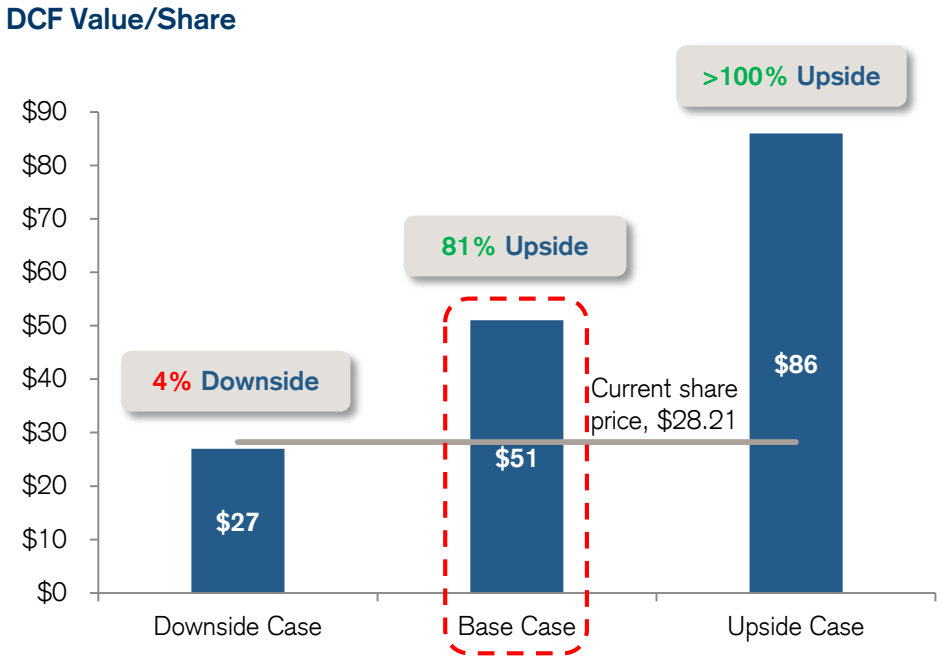
Risk/Reward Skewed to the Upside on Our DCF Forecasts



- Our DCF forecast assumes discounted cash flows through 2033 and assumes no terminal value thereafter
- **Upside case scenario**: Pricing: $675/Rx, Treatment Duration: 5 months/patient/year, Peak Penetration: 13.5%, POS: 85%
- **Base case scenario**: Pricing: $550/Rx, Treatment Duration: 4.5 months/patient/year, Peak Penetration: 12.5%, POS: 80%
- **Downside scenario**: Pricing: $500/Rx, Treatment Duration: 4.0 months, Peak Penetration: 11.0%, POS: 70%

Note: For purposes of this scenario analysis, we have looked at more bullish or more bearish assumptions of success and are not highlighting the full upside (e.g. takeout) or full downside (e.g. phase 3 study failure).

Source: Company data, Credit Suisse estimates and analysis

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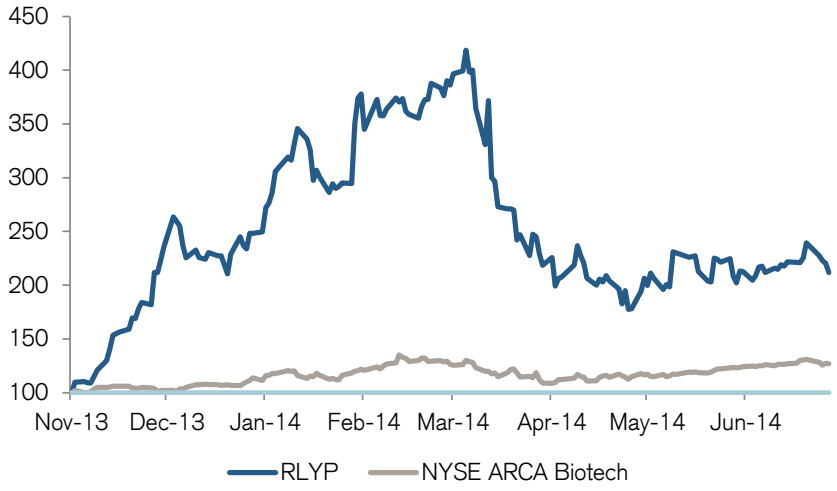
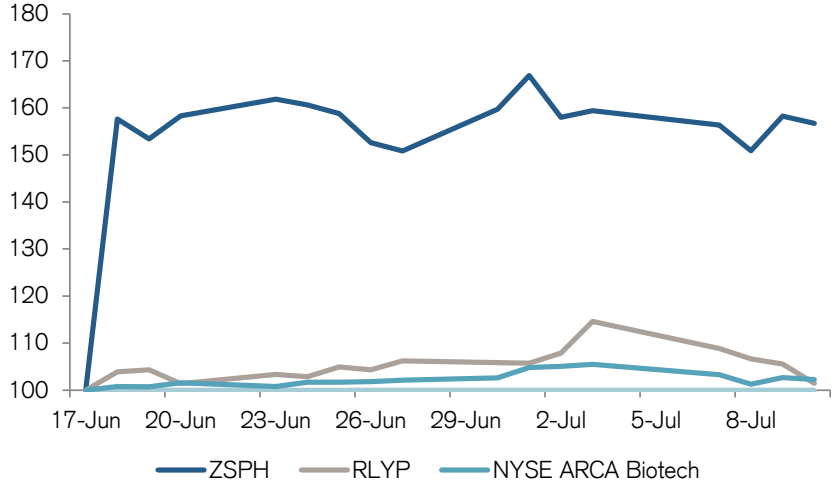
RLYP is Trading at ~110% Above Its IPO Price and at a Significant Premium to ZSPH

Indexed Performance Since RLYP's IPO



- IPO price (date): $11 (November 14, 2013)
- Current stock price: $23.30
- Market Capitalization: $820 million

Indexed Performance Since ZSPH's IPO



- IPO price (date): $18 (June 17, 2014)
- Current stock price: $28.21
- Market Capitalization: $562 million

Source: Company data, Thomson One, Credit Suisse estimates and analysis

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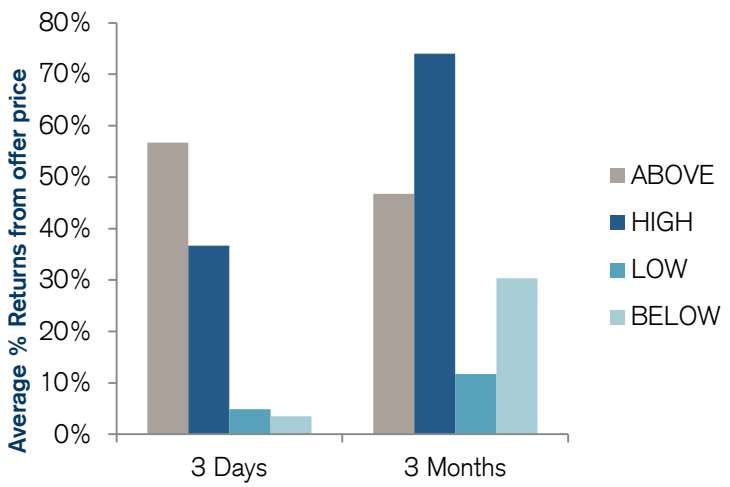
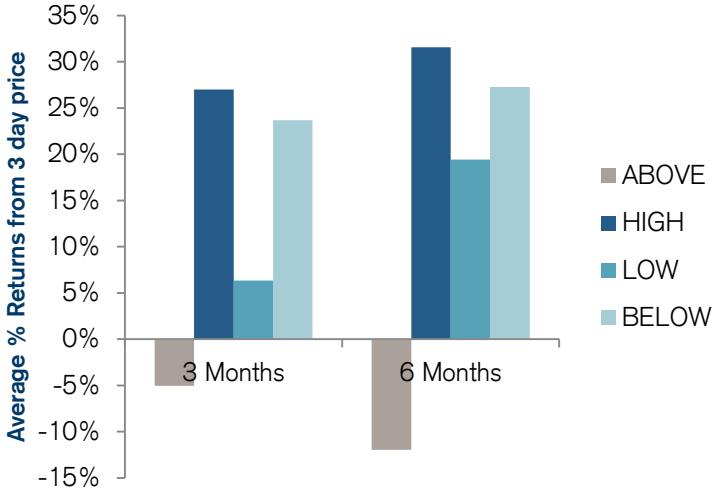
Strength of ZSPH IPO May Limit Some Upside in Coming Months, but DCF-Based Valuation Suggests Significant Longer-Term Upside

- **ZSPH IPO included 6.8 million shares at $18, up from 5 million at $15-$17/share**
  - Stock closed at $28.38 after first day of trading (up 58%)
- **Stocks with outsized near-term performance often lag relative to other IPOs**
  - Longer-term performance is tied to hitting milestones and meeting investor expectations

Pricing at high end predicts strong near term performance



Returns after initial pop show that most value often priced in



Note: Analysis includes all biotech IPOs from 2010-present. Transactions that priced above the offer price include ZSPH, KITE, VSAR, QURE, RARE, DRNA, OPHT, ONTX, AGIO, OMED and BLUE.

Source: Company data, Credit Suisse estimates and analysis

Company Background

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Table of Contents (Click on Titles to Navigate Through Note)

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ZS Pharma (ZSPH) Is a High-Class Company with Proprietary Zirconium Silicate Technology

- ZS Pharma is a biopharmaceutical company focused on the development and commercialization of highly selective, non-absorbed drugs to treat **renal, cardiovascular, liver and metabolic diseases**
- Proprietary **zirconium silicate technology** allows them to create highly selective ion traps that can reduce toxic levels of specific electrolytes without disturbing the balance of other electrolytes
- Initial focus is on **development of ZS-9**, its product candidate in phase 3 for the treatment of hyperkalemia
  - Hyperkalemia is a life-threatening condition in which elevated levels of potassium in the blood (greater than 5.0 mEq/L) increase the risk of muscle dysfunction, including cardiac arrhythmias and sudden cardiac death
- ZS Pharma is planning to submit its New Drug Application (US) and Marketing Authorization Application (EU) for ZS-9 in the first half of 2015
  - If approved, the company intends to commercialize ZS-9 in the US with their own specialty sales force targeting nephrologists and cardiologists and plans to seek one or more partners for commercialization in ex-US markets
- ZS Pharma was incorporated in the State of Delaware on February 5, 2008
  - The company's operations are located in Coppell, Texas and Menlo Park, California

Source: Company data, Credit Suisse estimates and analysis

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Senior Management Team with Strong Industry Experience

Robert Alexander, PhD *Chief Executive Officer*	■ Director, Alta Partners; Principal, MPM Capital ■ Business Development, Genentech	AltaPartners Genentech A Member of the Roche Group
Alvaro Guillem, PhD *President & Co-Founder*	■ Adams Respiratory Therapeutics ■ VP Quality at Genzyme/Bone Care International	genzyme ADAMS RESPIRATORY THERAPEUTICS™
Jeffrey Keyser, JD, PhD *COO & Co-Founder*	■ Chief Compliance Officer, Encysive ■ VP Reg. Affairs & Dev., Adams Respiratory Therapeutics	ENCYSIVE™ PHARMACEUTICALS ADAMS RESPIRATORY THERAPEUTICS™
Henrik Rasmussen, MD, PhD *Chief Medical Officer and Scientific Officer*	■ Corporate VP and Head of Clinical Dev., Medical & Regulatory Affairs, Novo Nordisk N. America ■ CMO, Nabi Biopharmaceuticals and GenVec	novo nordisk® NABI BIOPHARMACEUTICALS
Cynthia Smith *Chief Commercial Officer*	■ VP Market Access & Commercial Dev., Affymax ■ Merck & Co. and White House (OMB)	AFFYMAX® MERCK
Todd Creech *Chief Financial Officer*	■ CFO and VP of Business Development, SARcode Bioscience ■ CFO Sirion Therapeutics	SARCODE bioscience SIRiON Therapeutics
Adam Tomasi, PhD *Senior VP Corporate Development*	■ Principal, Alta Partners ■ Chemist, Cytokinetics	AltaPartners CYTOKINETICS

Source: Company data, Credit Suisse estimates and analysis

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Further Details on ZS Pharma's Strong Senior Management Team

Name	Position(s)	Comments
Robert Alexander, PhD	*Chief Executive Officer*	Dr. Alexander has been CEO since December 2013; He served as a member of board of directors since October 2012 and Chairman of the Board between March 2013 and March 2014. In the past he served as director at Alta Partners, Executive chairman & interim CEO of SARcode Biosciences, Principal in MPM Capital's BioEquities fund where he sourced opportunities and led due diligence efforts for both public and private investments, and worked in the Business Development group at Genentech. Dr. Alexander completed his post-doctoral fellowship at Stanford University in the Pathology department, holds a Ph.D. in Immunology from the University of North Carolina and a B.A. in Zoology from Miami University of Ohio.
Alvaro Guillem, PhD	*Co-Founder and President*	Dr. Guillem is co-founder of ZS Pharma and has served as President and a member of the board of directors since 2008. From February 2008 to December 2013, he served as the CEO. Dr.Guillem is a veteran of the pharmaceutical industry with over thirty years of leadership experience in bringing new therapies to market at both well-established and start-up companies. In the past he has held various positions at Ash Access Technology, Genzyme/Bone Care and Adams Respiratory Therapeutics. Dr. Guillem holds a B.S. in Chemistry from Mary Washington University and a Ph.D. in Chemistry from Virginia Commonwealth University.
Jeffrey Keyser, JD, PhD	*Co-Founder and Chief Operating Officer*	Dr. Keyser is a co-founder of ZS Pharma and has served as the Secretary, Chief Operating Officer, and member of the board of directors since 2008. He has over thirty years of experience in the pharmaceutical industry in regulatory, medical, clinical and product development and has directed efforts to develop, prepare and secure approvals of numerous INDs and NDAs in the United States, Canada, Australia and Europe. In the past he held various positions at Encysive Pharmaceuticals, Adams Respiratory Therapeutics, Medeva Americas, Marion Merrell Dow, Marion Laboratories and Abbott Laboratories. Dr. Keyser received his B.S. in Pharmacy and J.D. from Creighton University, holds an MPA from the University of Missouri at Kansas City and a Ph.D. in Economics from the University of Texas at Dallas.
Henrik S. Rasmussen, MD, PhD	*Chief Medical Officer and Chief Scientific Officer*	Dr. Rasmussen has served as the Chief Medical Officer and Chief Scientific Officer since October 2012. He has led numerous global development programs and regulatory filings worldwide, including NDAs and has over 150 published peer-reviewed papers in therapeutic areas including nephrology, cardiology and diabetes. In the past he held various positions at Rasmussen Biotech and Pharma Consulting, Novo Nordisk, Nabi Biopharmaceuticals, Genvec, British Biotech and Pfizer Central research. Dr. Rasmussen received his M.D. and Ph.D. from the University of Copenhagen in Denmark and is trained in internal medicine and cardiology.
Cynthia Smith	*Chief Commercial Officer*	Ms. Smith has served as the Chief Commercial Officer since June 2013. In the past she held various positions at Affymax Inc, Merck and Co, Healthcare System and Medicare Strategy, and in the White House Office of Management and Budget under the Clinton Administration. Ms. Smith earned her B.A. from the University of North Carolina at Chapel Hill, her M.S. in Public Policy from the Eagleton Institute at Rutgers University and her MBA from the Wharton School at the University of Pennsylvania.
Todd A. Creech	*Chief Financial Officer*	Mr. Creech has served as the Chief Financial Officer since August 2013 and as the Treasurer since February 2014. In the past he held various positions at SARcode Biosciences, Sirion Therapeutics and NovaQuest (the investment group within Quintiles, Inc). He also brings an additional ten years of biotech- and high-tech-specific consulting experience from his time at SRI International and Anderson Consulting. Mr. Creech holds undergraduate degrees in Finance and Accounting from Miami University of Ohio and an MBA from Duke University.
Adam Tomasi, PhD	*Senior Vice President, Corporate Development*	Dr. Tomasi has served as the VP of Corporate Development since August of 2013. Prior to ZS Pharma, he was a Principal at Alta Partners, a Venture Capital firm located in San Francisco. Prior to joining Alta, he completed fellowships in venture capital at MPM Capital and as an equity analyst at Lehman Brothers. Originally trained as an organic chemist, he spent seven years in early stage drug discovery with Gilead Sciences and Cytokinetics. He holds a B.S. in Chemistry from UC Berkeley, an MBA from the MIT Sloan School of Management, and a Ph.D. in Chemistry from UC Irvine, where he was a Fellow of the American Chemical Society and UC Regents and was a post-doctoral student at The Scripps Research Institute.

Source: Company data

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ZS Pharma's Board of Directors

Name	Position	Independent
Robert Alexander	*Chief Executive Officer, Director*	N
Alvaro Guillem	*President, Director*	N
Jeffrey Keyser	*Chief Operating Officer and Secretary, Director*	N
Marc Ostro	*Director*	Y
Guy Nohra	*Chairman & Director*	Y
John Whiting	*Director*	Y
Srinivas Akkaraju	*Director*	Y

Source: Company data

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ZS Pharma's Executive and Director Compensation

2013 Executive Compensation

Name	Position	Salary	Bonus	Option Awards	All Other Compensation	Total
Robert Alexander *	*Chief Executive Officer*	$291,667	$87,740	$799,710	$26,397	$1,205,466
Alvaro Guillem	*President*	$325,000	$113,750	$278,160	$27,065	$743,959
Todd Creech *	*Chief Financial Officer*	$113,144	$31,940	$499,392	$10,717	$655,227
Henrik Rasmussen	*Chief Scientific Officer and Chief Medical Officer*	$300,000	$90,000	$173,850	$34,318	$598,158

Non-Employee Director Compensation, effective June 17, 2014

Non-Employee Director	Annual Retainer	Stock Options
All non-employee members of the Board	$35,000	12,000
Additional retainer for Non-Executive Chairmen of the Board	$20,000	-
Chairman, Audit Committee:	$7,500	-
Chairman, Compensation Committee	$5,000	-
Chairman, Nominating and Corporate Governance Committee	$5,000	-

* - Robert Alexander's employment began in March 2013 and Todd Creech's employment began in August 2013

Source: Company data

Financial Statements

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Table of Contents (Click on Titles to Navigate Through Note)

CREDIT SUISSE

ZS Pharma Income Statement (2013A-2023E)

		FY 2014													
	FY 2013	Mar-14 1QA	Jun-14 2QE	Sep-14 3QE	Dec-14 4QE	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Product sales (US)	0	0	0	0	0	0	0	77,874	170,964	284,640	467,077	570,706	765,824	818,410	871,973
Milestones and royalty revenue (ex US)	0	0	0	0	0	0	0	40,000	5,841	12,822	21,348	35,031	42,803	57,437	61,381
Total revenues	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**117,874**	**176,804**	**297,462**	**488,425**	**605,737**	**808,627**	**875,847**	**933,354**
COGS	0	0	0	0	0	0	0	21,525	42,254	67,467	106,880	122,811	159,253	165,450	173,638
Gross profit	0	0	0	0	0	0	0	96,349	134,550	229,995	381,545	482,926	649,374	710,397	759,715
Research and development expenses	24,508	5,259	5,000	4,000	3,741	18,000	23,000	24,840	26,082	26,864	27,670	28,501	29,356	29,943	30,242
Selling, general and administrative expenses	7,686	4,017	4,000	4,000	2,483	14,500	40,000	79,500	108,625	124,919	138,660	152,526	167,778	171,134	172,845
Operating income (loss)	**(32,194)**	**(9,276)**	**(9,000)**	**(8,000)**	**(6,224)**	**(32,500)**	**(63,000)**	**(7,991)**	**(157)**	**78,212**	**215,215**	**301,900**	**452,240**	**509,321**	**556,628**
Interest (income)	(31)	(6)	(12)	(62)	(61)	(141)	(243)	(309)	(290)	(278)	(417)	(692)	(1,058)	(1,608)	(2,248)
Interest expense	9	3	0	75	225	303	1,200	1,200	1,200	1,200	600	0	0	0	0
Expense to mark warrants to market	1,424	1,297	0	0	0	1,297	0	0	0	0	0	0	0	0	0
Other expense	1	(3)	0	0	0	(3)	0	0	0	0	0	0	0	0	0
Profit (Loss) before tax	(33,597)	(10,567)	(8,988)	(8,013)	(6,388)	(33,956)	(63,957)	(8,882)	(1,067)	77,290	215,032	302,592	453,297	510,929	558,876
Income tax expense (benefit)	0	0	0	0	0	0	0	0	0	1,546	53,973	113,472	169,987	191,598	209,579
Net profit (loss)	(33,597)	(10,567)	(8,988)	(8,013)	(6,388)	(33,956)	(63,957)	(8,882)	(1,067)	75,745	161,059	189,120	283,311	319,330	349,298
Preferred stock accretion	(689)	(181)				(181)	0								
Pro forma net profit (loss)	**(32,862)**	**(9,451)**	**(8,988)**	**(8,013)**	**(6,388)**	**(34,137)**	**(63,957)**	**(8,882)**	**(1,067)**	**75,745**	**161,059**	**189,120**	**283,311**	**319,330**	**349,298**
Weighted avg. shares used to calculate diluted EPS	10,366	12,575	20,819	20,853	20,888	18,784	22,698	24,646	24,819	28,332	28,505	28,677	28,849	29,022	29,194
EPS - Diluted	**($3.17)**	**($0.75)**	**($0.43)**	**($0.38)**	**($0.31)**	**($1.82)**	**($2.82)**	**($0.36)**	**($0.04)**	**$2.67**	**$5.65**	**$6.59**	**$9.82**	**$11.00**	**$11.96**
Depreciation and amortization	705	241	257	369	482	1,348	2,930	3,609	4,294	5,265	6,415	7,236	7,578	6,863	6,530
EBITDA	**(31,489)**	**(9,035)**	**(8,743)**	**(7,631)**	**(5,742)**	**(31,152)**	**(60,070)**	**(4,381)**	**4,137**	**83,477**	**221,630**	**309,136**	**459,818**	**516,183**	**563,158**
Margin Analysis															
Gross margin (overall)								81.7%	76.1%	77.3%	78.1%	79.7%	80.3%	81.1%	81.4%
R&D margin (overall)								21.1%	14.8%	9.0%	5.7%	4.7%	3.6%	3.4%	3.2%
SG&A margin (overall)								67.4%	61.4%	42.0%	28.4%	25.2%	20.7%	19.5%	18.5%
EBITDA margin								-3.7%	2.3%	28.1%	45.4%	51.0%	56.9%	58.9%	60.3%
Operating margin								-6.8%	-0.1%	26.3%	44.1%	49.8%	55.9%	58.2%	59.6%
Statutory tax rate	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%
Effective tax rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	25.1%	37.5%	37.5%	37.5%	37.5%
Net income margin								-7.5%	-0.6%	25.5%	33.0%	31.2%	35.0%	36.5%	37.4%
Year/Year Changes															
Product revenue								NM	119.5%	66.5%	64.1%	22.2%	34.2%	6.9%	6.5%
Total revenue								NM	50.0%	68.2%	64.2%	24.0%	33.5%	8.3%	6.6%
Gross profit								NM	39.6%	70.9%	65.9%	26.6%	34.5%	9.4%	6.9%
R&D								8.0%	5.0%	3.0%	3.0%	3.0%	3.0%	2.0%	1.0%
SG&A								98.8%	36.6%	15.0%	11.0%	10.0%	10.0%	2.0%	1.0%
EBITDA								NM	NM	1917.8%	165.5%	39.5%	48.7%	12.3%	9.1%
Operating margin								NM	NM	NM	175.2%	40.3%	49.8%	12.6%	9.3%
Net income								NM	NM	NM	112.6%	17.4%	49.8%	12.7%	9.4%

Source: Company data, Credit Suisse estimates and analysis

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ZS Pharma Balance Sheet (2013A-2023E)

		FY 2014													
	FY 2013	Mar-14 1QA	Jun-14 2QE	Sep-14 3QE	Dec-14 4QE	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
ASSETS															
Current assets:															
Cash and cash equivalents	9,170	23,833	123,955	122,095	120,751	120,751	154,555	144,914	139,206	208,363	346,137	528,786	803,922	1,124,107	1,474,240
Restricted cash	150	150	150	150	150	150	150	0	0	0	0	0	0	0	0
Prepaid expenses	71	60	100	100	100	100	150	1,259	2,654	3,289	4,098	4,558	5,346	5,498	5,651
Other current assets	6	732	1,000	1,000	1,000	1,000	1,200	2,835	6,165	12,260	20,123	26,285	35,209	37,802	40,279
Total current assets	9,397	24,775	125,205	123,345	122,001	122,001	156,055	149,008	148,025	223,912	370,358	559,629	844,476	1,167,407	1,520,170
Property and equipment, net	4,625	5,843	8,586	11,217	13,675	13,675	20,745	27,135	32,842	37,577	41,162	43,926	46,347	46,985	47,955
Other assets	24	24	100	100	100	100	200	1,179	3,536	5,949	9,769	12,115	16,173	17,517	18,667
TOTAL ASSETS	**14,046**	**30,642**	**133,892**	**134,663**	**135,776**	**135,776**	**177,000**	**177,322**	**184,403**	**267,437**	**421,288**	**615,669**	**906,996**	**1,231,909**	**1,586,792**
LIABILITIES & STOCKHOLDERS' EQUITY															
Current liabilities:															
Accounts payable	1,489	2,455	1,973	2,192	1,705	1,705	2,208	5,173	6,788	7,809	8,982	8,324	9,764	10,042	10,321
Accrued liabilities	3,114	2,288	2,160	2,240	1,743	1,743	2,480	3,776	5,309	6,578	8,196	9,115	10,692	10,996	11,302
Current portion of long term debt	0	0	0	0	0	0	0	0	0	15,000	0	0	0	0	0
Current portion of capital lease obligation	73	37	0	0	0	0	0	0	0	0	0	0	0	0	0
Total current liabilities	**4,676**	**4,780**	**4,133**	**4,432**	**3,448**	**3,448**	**4,688**	**8,948**	**12,096**	**29,386**	**17,179**	**17,439**	**20,456**	**21,038**	**21,623**
Deferred rent	67	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Lease incentive	184	161	146	131	116	116	56	0	0	0	0	0	0	0	0
Long term debt	0	0	0	7,500	15,000	15,000	15,000	15,000	15,000	0	0	0	0	0	0
Capital lease obligation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Series B redeemable preferred stock warrant liability	2,667	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total liabilities	**7,594**	**5,010**	**4,348**	**12,132**	**18,633**	**18,633**	**19,813**	**24,017**	**27,165**	**29,455**	**17,248**	**17,508**	**20,525**	**21,107**	**21,692**
Commitments and contingencies:															
Convertible, redeemable preferred stock, Series B	8,387	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Convertible, redeemable preferred stock, Series C	43,247	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stockholders' equity															
Convertible preferred stock, Series A	1,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common stock, $0.001 par value	2	14	18	18	18	18	22	22	22	22	22	22	23	23	23
Additional paid-in capital	3,854	86,419	199,315	200,315	201,315	201,315	305,311	310,311	315,311	320,311	325,311	330,311	335,310	340,310	345,310
Accumulated deficit	(50,234)	(60,801)	(69,789)	(77,802)	(84,190)	(84,190)	(148,147)	(157,028)	(158,096)	(82,351)	78,708	267,828	551,139	870,469	1,219,767
Total stockholders' equity	**(45,182)**	**25,632**	**129,544**	**122,531**	**117,143**	**117,143**	**157,186**	**153,305**	**157,237**	**237,982**	**404,041**	**598,161**	**886,472**	**1,210,802**	**1,565,100**
TOTAL LIABILITIES & STOCKHOLDERS' EQUITY	**14,046**	**30,642**	**133,892**	**134,663**	**135,776**	**135,776**	**177,000**	**177,322**	**184,403**	**267,437**	**421,288**	**615,669**	**906,996**	**1,231,909**	**1,586,792**

Source: Company data, Credit Suisse estimates and analysis

CREDIT SUISSE

ZS Pharma Statement of Cash Flows (2013A-2023E)

		FY 2014													
	FY 2013	Mar-14 1QA	Jun-14 2QE	Sep-14 3QE	Dec-14 4QE	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Operating activities:															
Net loss	(33,597)	(10,567)	(8,988)	(8,013)	(6,388)	(33,956)	(63,957)	(8,882)	(1,067)	75,745	161,059	189,120	283,311	319,330	349,298
Depreciation and amortization	705	241	257	369	482	1,348	2,930	3,609	4,294	5,265	6,415	7,236	7,578	6,863	6,530
Amortization of lease incentive	(18)	(23)	(15)	(15)	(15)	(68)	(60)	(56)	0	0	0	0	0	0	0
Share-based expenses	2,142	871	900	1,000	1,000	3,771	4,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Warrant expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Series B warrant mark-to-market expense	1,424	1,297	0	0	0	1,297	0	0	0	0	0	0	0	0	0
Loss on disposal of assets and other noncash income	(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Changes in operating assets and liabilities:															
Prepaid expenses and other assets	(84)	(753)	(384)	0	0	(1,137)	(350)	(3,722)	(7,083)	(9,143)	(12,491)	(8,968)	(13,770)	(4,090)	(3,780)
Accounts payable	505	570	(482)	219	(487)	(180)	503	2,964	1,615	1,021	1,173	(658)	1,440	278	279
Accrued expenses	2,329	(630)	(128)	80	(497)	(1,175)	737	1,296	1,533	1,269	1,619	919	1,577	304	306
Deferred rent	67	2	0	0	0	2	0	0	0	0	0	0	0	0	0
Net cash from (used in) operating activities	**(26,529)**	**(8,992)**	**(8,841)**	**(6,360)**	**(5,905)**	**(30,098)**	**(56,196)**	**210**	**4,291**	**79,157**	**162,775**	**192,649**	**285,136**	**327,685**	**357,633**
Investing activities:															
Purchases of property and equipment	(3,771)	(1,061)	(3,000)	(3,000)	(2,939)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(7,500)	(7,500)
Net cash from (used in) investing activities	**(3,771)**	**(1,061)**	**(3,000)**	**(3,000)**	**(2,939)**	**(10,000)**	**(10,000)**	**(10,000)**	**(10,000)**	**(10,000)**	**(10,000)**	**(10,000)**	**(10,000)**	**(7,500)**	**(7,500)**
Financing activities:															
Proceeds from issuance of note payable, net	0	0	0	7,500	7,500	15,000	0	0	0	0	(15,000)	0	0	0	0
Proceeds from exercise of stock options	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from exercise of warrants	265	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from issuance of restricted stock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from issuance of Series A preferred stock, net	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from issuance of Series B preferred stock, net	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from issuance of Series C preferred stock, net	15,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from issuance of Series D preferred stock, net	0	24,753	0	0	0	24,753	0	0	0	0	0	0	0	0	0
Proceeds from issuance of common stock, net	0	0	112,000	0	0	112,000	100,000	0	0	0	0	0	0	0	0
Principal payments on capital lease	(146)	(37)	(37)	0	0	(74)	0	0	0	0	0	0	0	0	0
Restricted cash	(150)	0	0	0	0	0	0	150	0	0	0	0	0	0	0
Net cash from (used in) by financing activities	**15,069**	**24,716**	**111,963**	**7,500**	**7,500**	**151,679**	**100,000**	**150**	**0**	**0**	**(15,000)**	**0**	**0**	**0**	**0**
Net (decrease) increase in cash and cash equivalents	(15,231)	14,663	100,122	(1,860)	(1,344)	111,581	33,804	(9,640)	(5,709)	69,157	137,775	182,649	275,136	320,185	350,133
Cash and cash equivalents at beginning of period	24,401	9,170	23,833	123,955	122,095	9,170	120,751	154,555	144,914	139,206	208,363	346,137	528,786	803,922	1,124,107
Cash and cash equivalents at end of period	9,170	23,833	123,955	122,095	120,751	120,751	154,555	144,914	139,206	208,363	346,137	528,786	803,922	1,124,107	1,474,240

Source: Company data, Credit Suisse estimates and analysis

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Companies Mentioned *(Price as of 10-Jul-2014)*

Relypsa (RLYP.OQ, $23.3)
ZS Pharma, Inc. (ZSPH.OQ, $28.21, OUTPERFORM[V], TP $51.0)

Disclosure Appendix

Important Global Disclosures

I, Vamil Divan, MD, certify that (1) the views expressed in this report accurately reflect my personal views about all of the subject companies and securities and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

3-Year Price and Rating History for ZS Pharma, Inc. (ZSPH.OQ)

ZSPH.OQ	Closing Price	Target Price	
Date	(US$)	(US$)	Rating
18-Jun-14	28.38		R

** Asterisk signifies initiation or assumption of coverage.*

The analyst(s) responsible for preparing this research report received Compensation that is based upon various factors including Credit Suisse's total revenues, a portion of which are generated by Credit Suisse's investment banking activities

As of December 10, 2012 Analysts' stock rating are defined as follows:

Outperform (O) : The stock's total return is expected to outperform the relevant benchmark*over the next 12 months.

Neutral (N) : The stock's total return is expected to be in line with the relevant benchmark* over the next 12 months.

Underperform (U) : The stock's total return is expected to underperform the relevant benchmark* over the next 12 months.

**Relevant benchmark by region: As of 10th December 2012, Japanese ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. As of 2nd October 2012, U.S. and Canadian as well as European ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. For Latin American and non-Japan Asia stocks, ratings are based on a stock's total return relative to the average total return of the relevant country or regional benchmark; prior to 2nd October 2012 U.S. and Canadian ratings were based on (1) a stock's absolute total return potential to its current share price and (2) the relative attractiveness of a stock's total return potential within an analyst's coverage universe. For Australian and New Zealand stocks, 12-month rolling yield is incorporated in the absolute total return calculation and a 15% and a 7.5% threshold replace the 10-15% level in the Outperform and Underperform stock rating definitions, respectively. The 15% and 7.5% thresholds replace the +10-15% and -10-15% levels in the Neutral stock rating definition, respectively. Prior to 10th December 2012, Japanese ratings were based on a stock's total return relative to the average total return of the relevant country or regional benchmark.*

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Analysts' sector weightings are distinct from analysts' stock ratings and are based on the analyst's expectations for the fundamentals and/or valuation of the sector* relative to the group's historic fundamentals and/or valuation:

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Market Weight : The analyst's expectation for the sector's fundamentals and/or valuation is neutral over the next 12 months.

Underweight : The analyst's expectation for the sector's fundamentals and/or valuation is cautious over the next 12 months.

**An analyst's coverage sector consists of all companies covered by the analyst within the relevant sector. An analyst may cover multiple sectors.*

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Global Ratings Distribution

Rating	Versus universe (%)	Of which banking clients (%)
Outperform/Buy*	44%	(54% banking clients)
Neutral/Hold*	40%	(49% banking clients)
Underperform/Sell*	13%	(48% banking clients)
Restricted	3%	

**For purposes of the NYSE and NASD ratings distribution disclosure requirements, our stock ratings of Outperform, Neutral, and Underperform most closely correspond to Buy, Hold, and Sell, respectively; however, the meanings are not the same, as our stock ratings are determined on a relative basis. (Please refer to definitions above.) An investor's decision to buy or sell a security should be based on investment objectives, current holdings, and other individual factors.*

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Price Target: (12 months) for ZS Pharma, Inc. (ZSPH.OQ)

Method: Our $51 target price for ZSPH is based on discounted cash flow valuation. We use a 11.5% weighted average cost of capital and forecast discounted cash flows through 2033, with no terminal value thereafter.

Risk: Risks to our $51 target price for ZSPH are (1) clinical setbacks (2) poor execution and (3) earlier-than-expected generic competition for ZS-9.

Please refer to the firm's disclosure website at https://rave.credit-suisse.com/disclosures for the definitions of abbreviations typically used in the target price method and risk sections.

See the Companies Mentioned section for full company names

The subject company (ZSPH.OQ) currently is, or was during the 12-month period preceding the date of distribution of this report, a client of Credit Suisse.

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Credit Suisse has managed or co-managed a public offering of securities for the subject company (ZSPH.OQ) within the past 12 months.

Credit Suisse has received investment banking related compensation from the subject company (ZSPH.OQ) within the past 12 months

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As of the date of this report, Credit Suisse makes a market in the following subject companies (ZSPH.OQ).

Important Regional Disclosures

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The analyst(s) involved in the preparation of this report have not visited the material operations of the subject company (ZSPH.OQ) within the past 12 months

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