

Interactive Brokers Webcast

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# Volatility Oriented ETPs

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# Volatility Oriented ETPs

## Outline

- **Introduction to VIX<sup>®</sup> Index Related ETPs**
- **ETPs Relationship to VIX Index**
- **Performance Analysis**
- **Trading Examples**
- **Summary / Q&A / Contact**

# VIX Related ETPs

## Introduction

- **Volatility oriented Exchange Traded Notes and Exchange Traded Funds (collectively ETPs) do not offer direct exposure to the CBOE Volatility Index<sup>®</sup> (VIX)**
- **They allow traders and investors the ability to gain exposure to a portfolio of VIX futures contracts**
- **This exposure may be long, leveraged long, or short a portfolio of VIX futures**

# Introduction to Funds

## Actively Traded Funds

**iPath<sup>®</sup> S&P 500 VIX Short-Term Futures<sup>™</sup> ETN**  
**VXX - Long VIX Futures**

**ProShares<sup>®</sup> Short VIX Short-Term Futures ETF**  
**SVXY – Daily Short VIX Futures**

**ProShares<sup>®</sup> Ultra VIX Short-Term Futures ETF**  
**UVXY – Daily Two Times VIX Futures**

# Introduction to Funds

## VXX Holdings

**As of 2/8/2016**

Index Components	Weightings %
CBOE VIX Future MAR 16	72.53%
CBOE VIX Future FEB 16	27.47%

Source: S&P Dow Jones Indices LLC, subject to change.

**72.53% March VIX Futures**  
**27.47% February VIX Futures**

Source [www.ipathetn.com](http://www.ipathetn.com)

# Introduction to Funds

## SVXY Holdings

**As of 2/8/2016**

As of 2/8/16

Description	Exposure Value (Notional + G/L)	Market Value (\$)	Shares/Contracts
CBOE VIX FUTURE 02/17/2016 (UXG6)	(143,574,975.00)	-	(5,647.00)
CBOE VIX FUTURE 03/16/2016 (UXH6)	(380,075,675.00)	-	(15,853.00)
NET OTHER ASSETS / CASH	-	\$522,716,828.70	522,716,828.70

**Short \$380,075,675 March VIX Futures (72.58%)**  
**Short \$143,574,975 February VIX Futures (27.42%)**

Source [www.proshares.com](http://www.proshares.com)

# Introduction to Funds

## UVXY Holdings

**As of 2/8/2016**

As of 2/8/16

Description	Exposure Value (Notional + G/L)	Market Value (\$)	Shares/Contracts
CBOE VIX FUTURE 03/16/2016 (UXH6)	529,727,625.00	-	22,095.00
CBOE VIX FUTURE 02/17/2016 (UXG6)	200,882,925.00	-	7,901.00
NET OTHER ASSETS / CASH	-	\$365,606,025.40	365,606,025.40

**Long \$529,727,625 March VIX Futures (143.8%)**  
**Long \$200,882,925 February VIX Futures (56.2%)**

Source [www.proshares.com](http://www.proshares.com)



# Performance Analysis

## 2015 Performance

### Selected ETP Performance

Long Short Term ETPs	Ticker	12/31/2014	12/31/2015	Change	Percent
iPath S&P 500 VIX ST Futures ETN	VXX	31.51	20.10	-11.41	-36.21%
ProShares VIX Short-Term Futures ETF	VIXY	20.99	13.33	-7.66	-36.49%
VelocityShares Long VIX ST ETN	VIIX	42.70	27.12	-15.58	-36.49%
<b>Long Mid Term ETP</b>					
iPath S&P 500 VIX MT Futures ETN	VXZ	13.12	11.14	-1.98	-15.09%
<b>Leveraged Long Short Term ETPs</b>					
VelocityShares Daily 2x VIX ST ETN	TVIX	27.60	6.26	-21.34	-77.32%
ProShares Ultra VIX Short Term Fut ETF	UVXY	125.75	28.35	-97.40	-77.46%
<b>Inverse Short Term ETPs</b>					
VelocityShares Daily Inverse VIX ST ETN	XIV	31.14	25.80	-5.34	-17.15%
ProShares Short VIX Short Term Fut ETF	SVXY	61.16	50.45	-10.71	-17.51%
<b>Inverse Mid Term Futures ETP</b>					
VelocityShares Daily Inverse VIX MT ETN	ZIV	41.77	41.31	-0.46	-1.10%

Data Source: Bloomberg

# Performance Analysis

## January 2016 Performance

### Selected ETP Performance

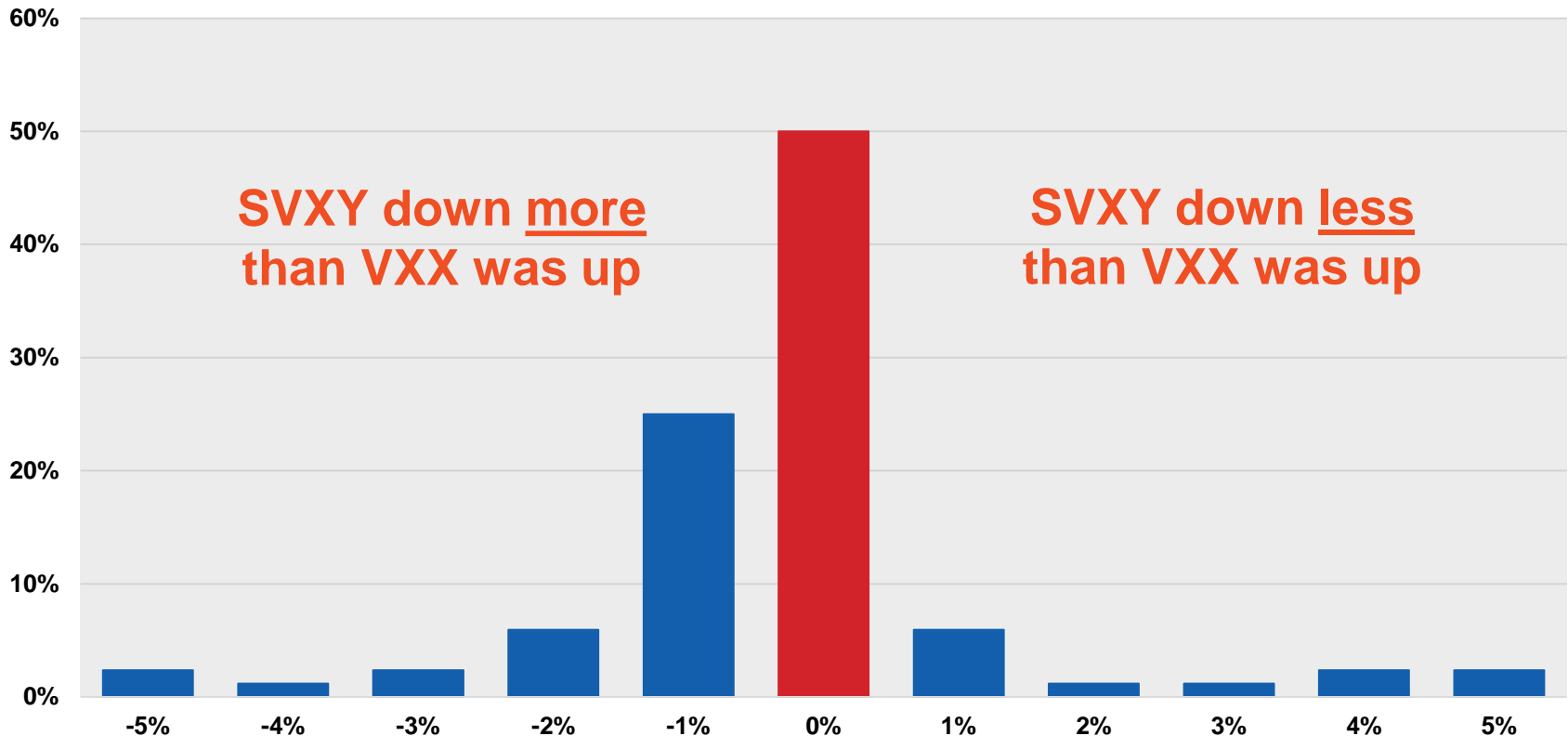
Long Short Term ETPs	Ticker	12/31/2015	1/29/2016	Change	Percent
iPath S&P 500 VIX ST Futures ETN	VXX	20.10	24.12	4.02	20.00%
ProShares VIX Short-Term Futures ETF	VIXY	13.33	15.99	2.66	19.95%
VelocityShares Long VIX ST ETN	VIIX	27.12	32.56	5.44	20.06%
<b>Long Mid Term ETP</b>					
iPath S&P 500 VIX MT Futures ETN	VXZ	11.14	12.09	0.95	8.53%
<b>Leveraged Long Short Term ETPs</b>					
VelocityShares Daily 2x VIX ST ETN	TVIX	6.26	8.45	2.19	34.98%
ProShares Ultra VIX Short Term Fut ETF	UVXY	28.35	38.47	10.12	35.70%
<b>Inverse Short Term ETPs</b>					
VelocityShares Daily Inverse VIX ST ETN	XIV	25.80	20.02	-5.78	-22.40%
ProShares Short VIX Short Term Fut ETF	SVXY	50.45	39.12	-11.33	-22.46%
<b>Inverse Mid Term Futures ETP</b>					
VelocityShares Daily Inverse VIX MT ETN	ZIV	41.31	37.17	-4.14	-10.02%

Data Source: Bloomberg

# VIX Related Exchange

## VXX vs. SVXY

### Weekly Performance Relationship when VXX is Higher

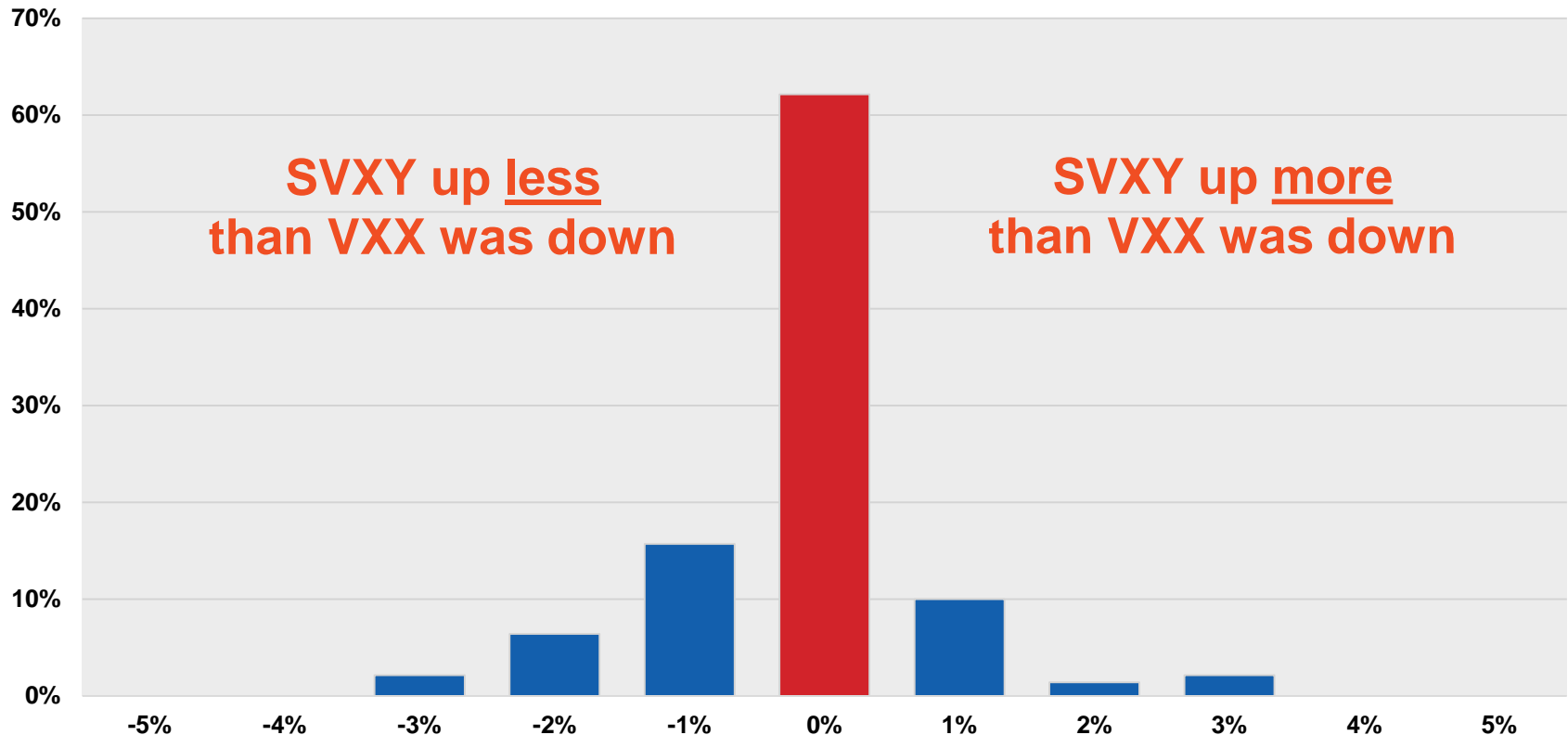


Data Source: Bloomberg

# VIX Related Exchange

## VXX vs. SVXY

### Weekly Performance Relationship when VXX is Lower

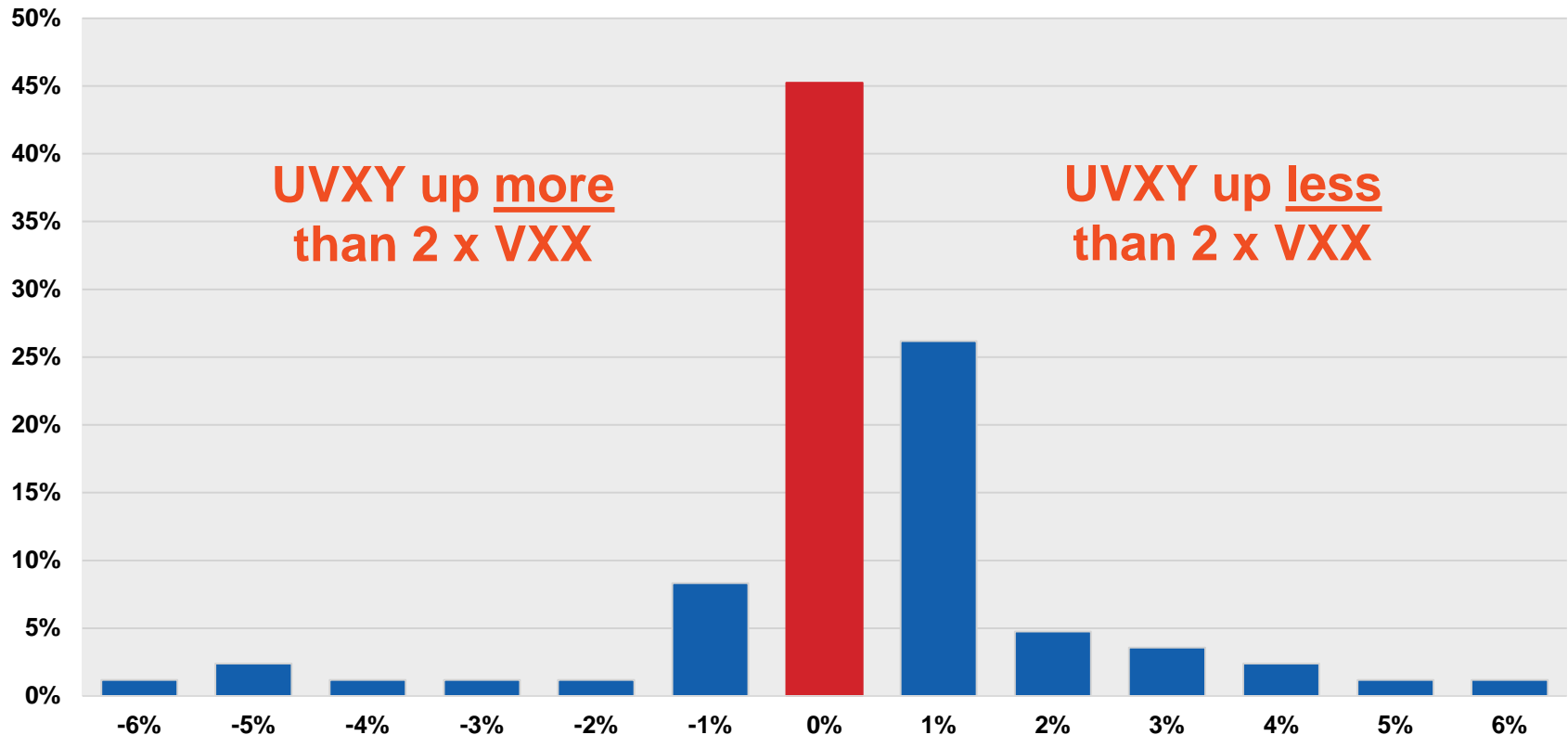


Data Source: Bloomberg

# VIX Related Exchange

## VXX vs. UVXY

### Weekly Performance Relationship when VXX is Higher

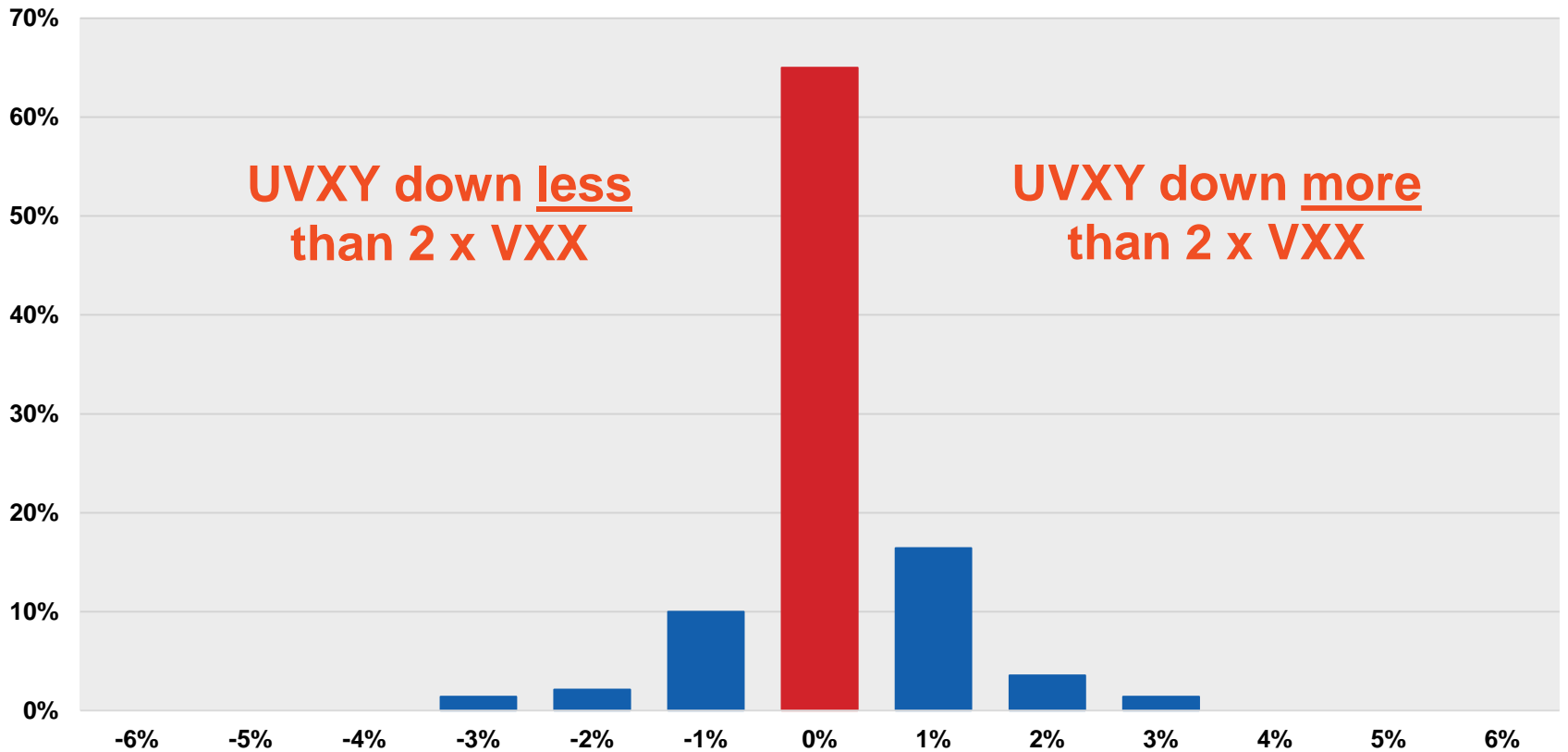


Data Source: Bloomberg

# VIX Related Exchange

## VXX vs. UVXY

### Weekly Performance Relationship when VXX is Lower



Data Source: Bloomberg

# Relationship With VIX Futures

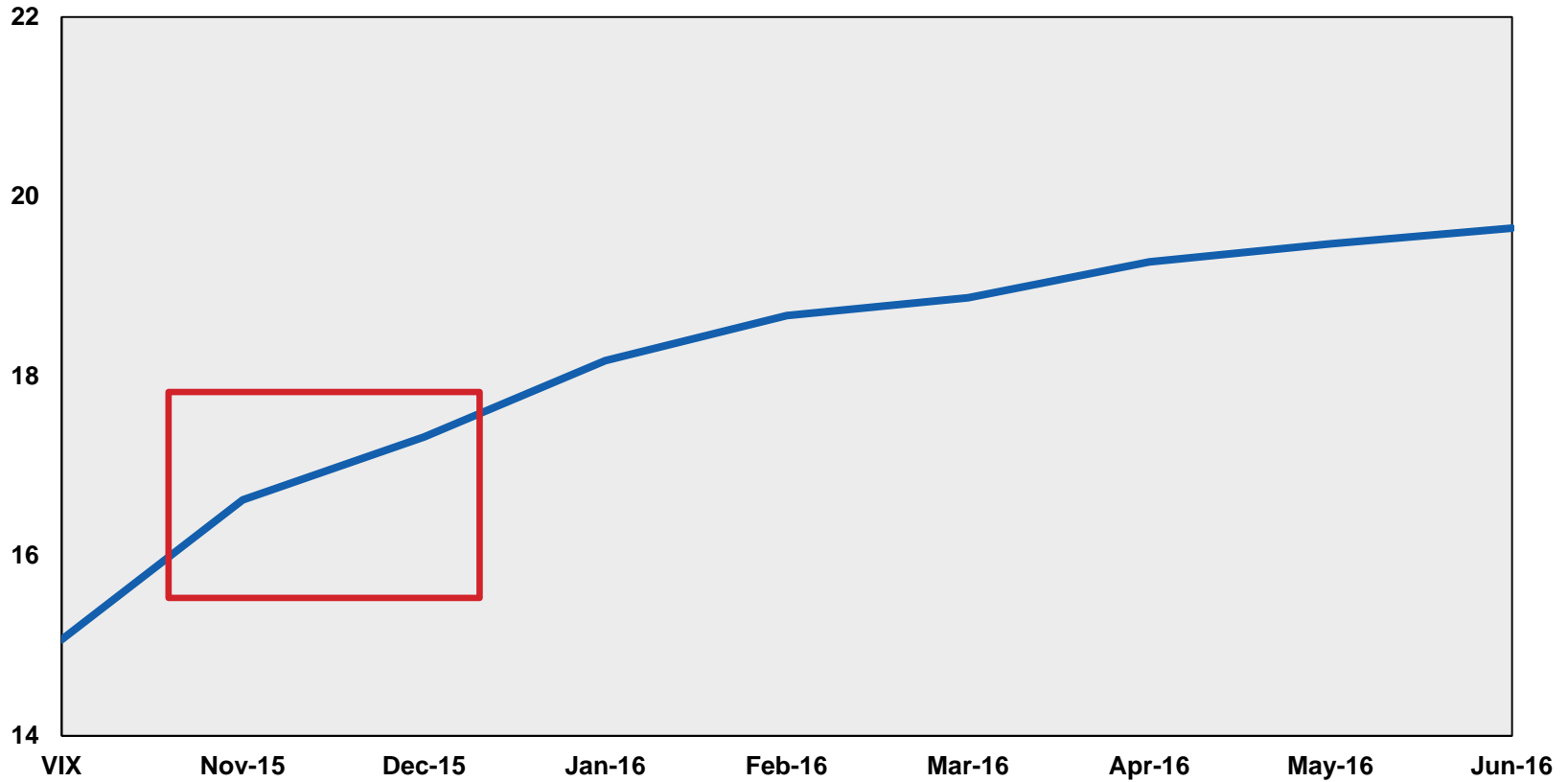
## Overview

- **Each fund offers a trader exposure to the front two month VIX futures contracts**
- **This weighting shifts every day to maintain a 30 day weighted outlook**
- **When the front month is at a discount to the second month this may cause a performance drag for VXX and UVXY**
- **When the front month is at a premium to the second month this may cause a performance drag for SVXY**

# Relationship With VIX Futures

## Contango / Backwardation

### Contango

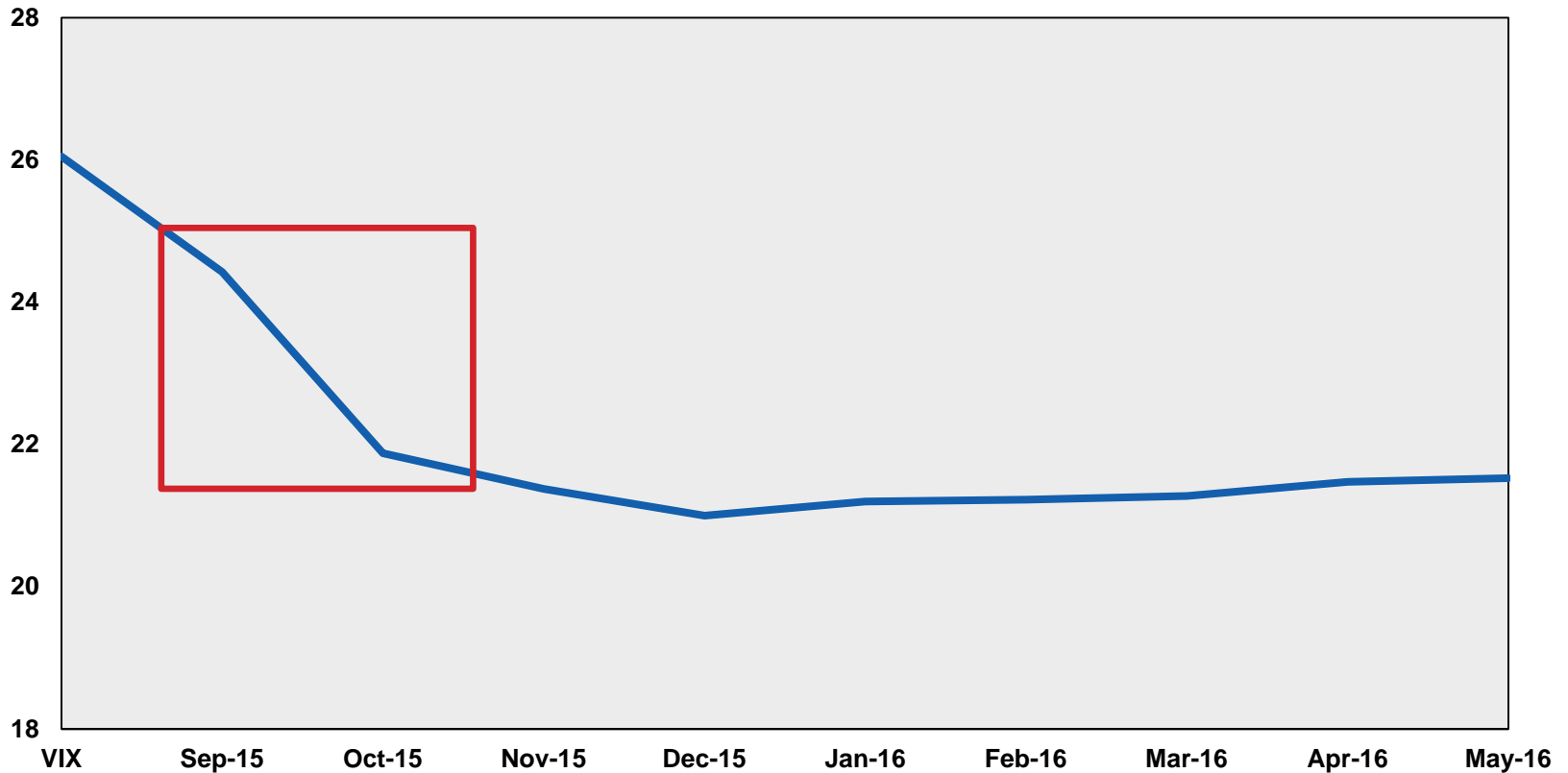




# Relationship With VIX Futures

## Contango / Backwardation

### Backwardation



# Relationship With VIX Futures

## Backwardation History

### Percent Days in Backwardation by Year

Year	Month 1 Future Higher than Month 2	VXX Performance	SVXY Performance	UVXY Performance
2007	29.48%	42.93%	-51.07%	28.50%
2008	48.62%	126.49%	-71.42%	226.24%
2009	26.98%	-64.90%	115.65%	-90.69%
2010	6.35%	-71.99%	144.49%	-94.59%
2011	30.95%	-3.72%	-45.47%	-48.87%
2012	0.80%	-77.92%	150.38%	-97.16%
2013	3.57%	-65.72%	106.17%	-91.97%
2014	10.32%	-25.50%	-9.35%	-62.53%
2015	19.05%	-25.99%	-17.51%	-77.46%

Data Source: Bloomberg

# Relationship With VIX Futures

## Backwardation Streaks

### Longest Periods of Backwardation

Rank	Start	End	Days		Rank	Start	End	Days
1	8/1/2011	11/15/2011	76		11	10/9/2014	10/20/2014	8
2	9/12/2008	12/10/2008	63		12	4/20/2009	4/28/2009	7
3	1/14/2009	3/11/2009	39		12	3/19/2008	3/28/2008	7
4	8/9/2007	9/17/2007	27		12	10/17/2007	10/25/2007	7
<b>5</b>	<b>1/4/2016</b>	<b>2/8/2016*</b>	<b>25</b>		15	1/12/2015	1/20/2015	6
6	1/17/2008	2/15/2008	21		15	12/12/2008	12/19/2008	6
7	8/21/2015	9/15/2015	17		15	3/1/2007	3/8/2007	6
8	6/26/2008	7/18/2008	16		18	1/30/2014	2/5/2014	5
9	9/22/2015	10/7/2015	12		18	8/1/2007	8/7/2007	5
9	3/18/2009	4/2/2009	12					

*\*Streak was ongoing as of 2/8/2016*

Data Source: Bloomberg

# Trading Examples

## Neutral to Short VXX

Thursday February 4, 2016 – VXX at 25.29

**Sell VXX Feb 5<sup>th</sup> 27 Calls at 0.13**

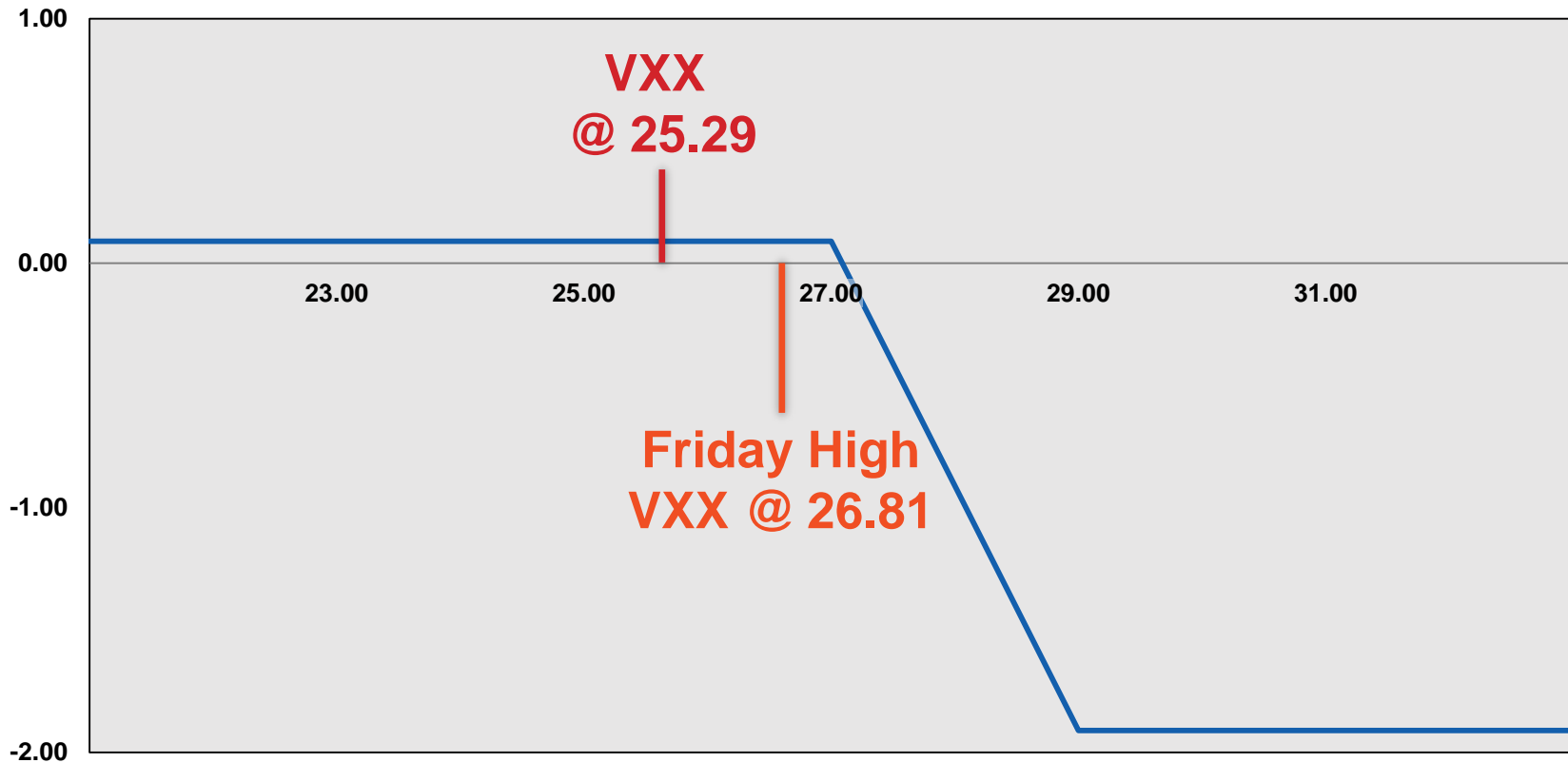
**Buy VXX Feb 5<sup>th</sup> 29 Calls at 0.04**

**Net Income = 0.09**

# Trading Examples

## Neutral to Short VXX

### VXX Feb 5<sup>th</sup> 27 / 29 Bear Call Spread



# Trading Examples

## Neutral to Bullish on VXX

Friday January 22, 2016 – VXX at 25.74

Buy VXX Jan 29<sup>th</sup> 21 Call at 4.78

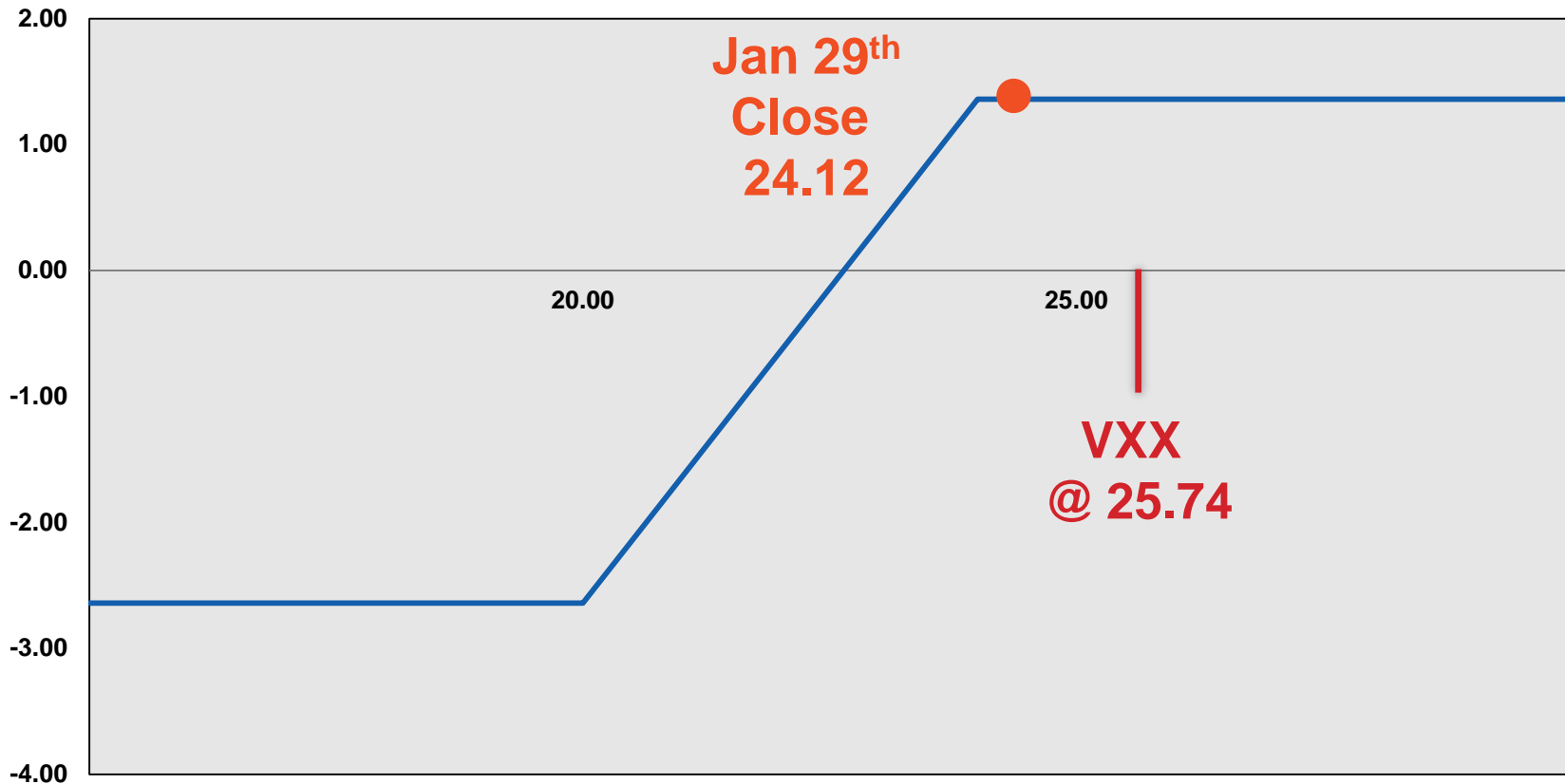
Sell VXX Jan 29<sup>th</sup> 24 Call at 2.14

**Net Cost = 2.64**

# Trading Example

## Neutral to Bullish on VXX

### VXX Jan 29<sup>th</sup> 21 / 24 Bull Call Spread



# Trading Examples

## Bullish on UVXY

Friday January 29, 2016 – UVXY at 38.47

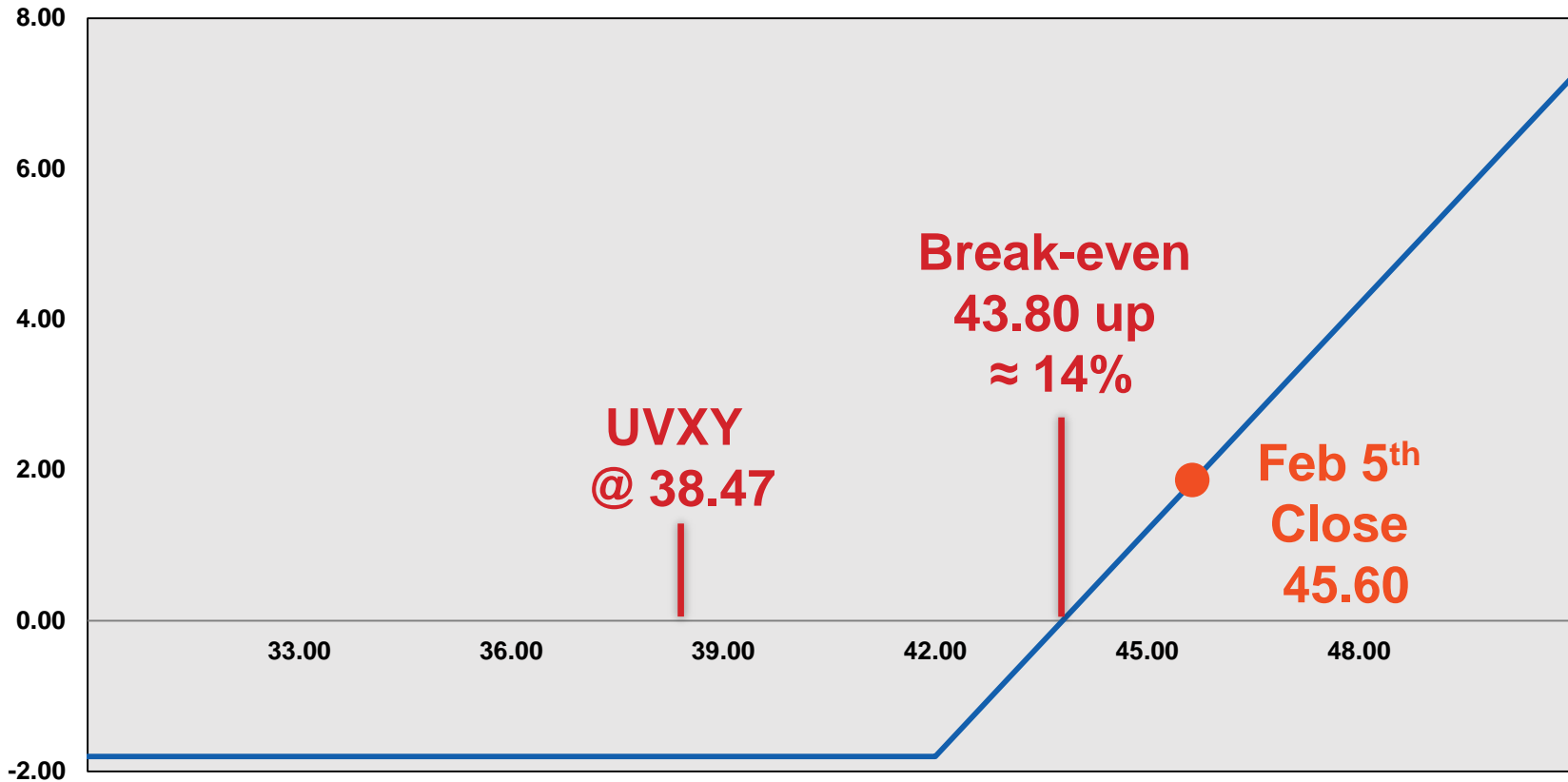
Buy UVXY Feb 5<sup>th</sup> 42 Calls at 1.80



# Trading Examples

## Bullish on UVXY

### Long UVXY Feb 5<sup>th</sup> 42 Call



# Trading Examples

## Bullish on VXX

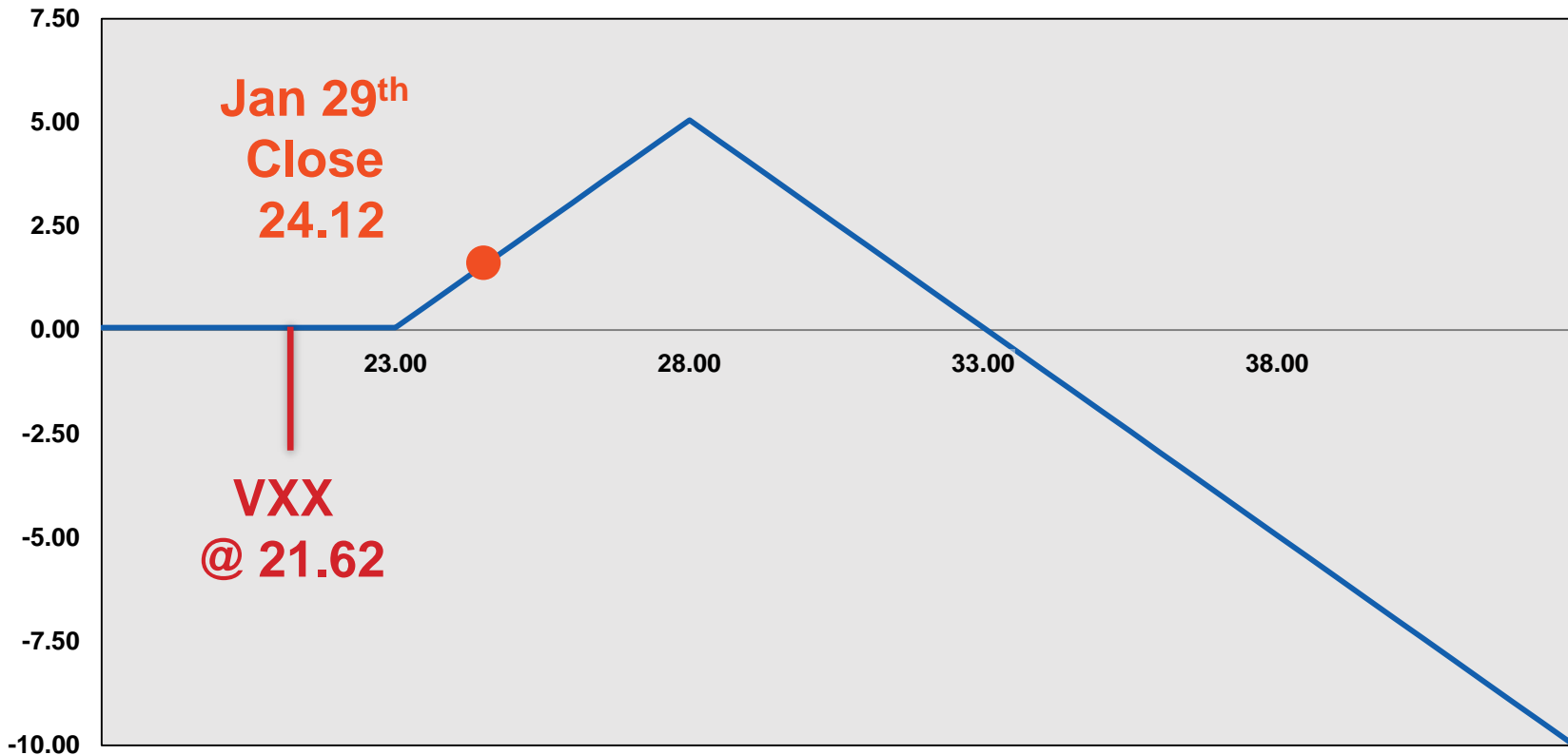
Monday January 4, 2016 – VXX at 21.62

Buy 1 VXX Jan 29<sup>th</sup> 23 Call at 1.64  
Sell 2 VXX Jan 29<sup>th</sup> 28 Calls at 0.85 each  
**Net Credit = 0.06**

# Trading Examples

## Bullish on VXX

**Long VXX Jan 29<sup>th</sup> 23 Call + Short 2 VXX Jan 29<sup>th</sup> 28 Calls**



# Volatility Oriented ETPs

## Summary

- **VXX, SVXY, UVXY and the other volatility oriented ETPs offer traders exposure to a VIX-related strategy (not VIX)**
- **Compounding of returns has resulted in a disconnect between unleveraged long, leveraged long, and inverse funds**
- **These funds offer traders opportunities to benefit from long, short, or even neutral outlooks for the equity market and volatility**

# Volatility Oriented ETPs

## Links / Contact

### Links

[www.cboe.com/volatility](http://www.cboe.com/volatility)

[www.ipathetn.com](http://www.ipathetn.com)

[www.proshares.com](http://www.proshares.com)

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