

WeeklysSM - Options and Futures that Expire on a Weekly Basis

CBOE Risk Management Conference Europe 2015

Geneva, Switzerland

29 September 2015

Dominic Salvino
VIX Specialist
Group One, LLC

Agenda

- Weekly VIX[®] Futures
 - Symbology & Firm Readiness
 - Backwardation and Contango
- Weekly VIX Options
 - Skew curve
 - Mean reversion
 - Commodity pricing
- Questions

Event specific

What do you want to own if they actually say something?



Symbology

➤ Underlying Index:

- CBOE Volatility Index[®] (VIX)

➤ Indicative Values:

- CBOE SPX Near-Term VIX Index (Ticker: VIN)
- CBOE SPX Far-Term VIX Index (Ticker: VIF)

➤ Futures Symbols:

- 39VX/U5 – Week 39 Expiration – Sept 30
- 40VX/V5 – Week 40 Expiration – Oct 7
- 41VX/V5 – Week 41 Expiration – Oct 14
- VIX/V5 – Week 41 Expiration – Oct 21
- 43VX/V5 – Week 43 Expiration – Oct 28

Note the odd man out. Week 42 is a “serial” maturity.

Bloomberg Contract Table

VIX Index		1) Settings			2) Actions			Futu	
4) Futures									
VIX Week 4 Futures							Sort By	Expiration	As
7) CBF (CEM)		Display	Quoted Val	Yield		Session			
Contracts	13	Aggr Vol	76,167	Aggr Open Int	322,858				
Description	Last	Chg	Settle	Time	Bid	Ask	Open Int	Volume	Yest Settle
21) Spot	↑22.68		+0.24	12:15					22.44
22) Sep15 Week 4			--	9/22			216	33	22.3000
23) Sep15 Week 5	21.6000		-0.7500	12:18	22.3500	22.6500	148	14	22.3500
24) Oct15 Week 1	21.9000		-0.0500	12:18	21.9000	22.2500	63	15	21.9500
25) Oct15 Week 2			--	9/22	21.8000	22.1500	126	77	21.9000
26) Oct15	↓21.6600		-0.1150	12:19	21.6500	21.7000	176792	47378	21.7750
27) Nov15	↓21.0400		-0.0850	12:19	21.0000	21.0500	44132	14467	21.1250
28) Dec15	↑20.8000		-0.0750	12:19	20.8000	20.8500	35166	7178	20.8750
29) Jan16	↑21.1000		+0.0250	12:19	21.0500	21.1000	23948	3971	21.0750
30) Feb16	21.2500		-0.0250	12:18	21.2000	21.2500	18156	1362	21.2750
31) Mar16	21.2500		-0.0250	12:19	21.2000	21.2500	16156	1235	21.2750
32) Apr16	↓21.4600		-0.0650	12:19	21.4500	21.5000	7430	386	21.5250
33) May16	21.5500		--	12:18	21.4500	21.5500	525	51	21.5500
34) Jun16	22.1400		+0.5150	12:18	20.3500	21.9000			21.6250

Note the open interest and volume differences

VIX® Index and Select VIX Futures in August 2015

Over the 3 trading days ending Aug. 24 - the S&P 500 Index fell **9%**, the VIX Index rose **167%**, and the VIX Weekly Wk 34 futures rose **147%**



(Aug. 14 - 26, 2015) Daily closing values for VIX Index, and end-of-day settlement values for VIX futures; Wk 34 VIX Weeklys settled the the morning of Aug. 26.

Source: CBOE Holdings www.cboe.com/VIX

Sept 17, 2015 – The FED does nothing

Somehow this is news

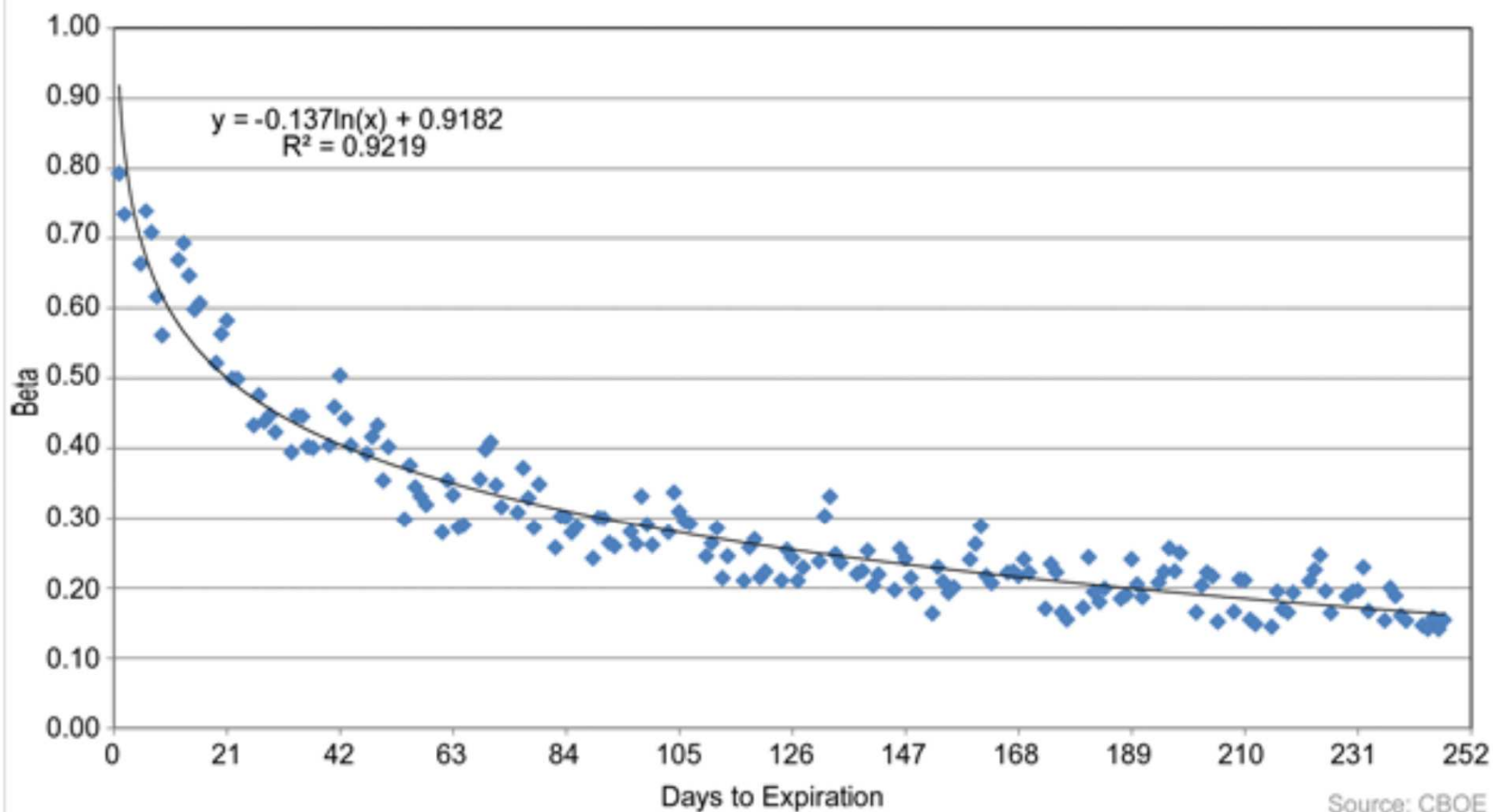


VIX Index (Chicago Board Options Exchange SPX Volatility Index) Intraday Price C
Copyright© 2015 Bloomberg Finance L.P. 23-Sep-2015 11:27:58

Beta of VIX[®] Futures to the VIX Index

BETA OF VIX FUTURES TO THE VIX INDEX AS A FUNCTION OF TIME TO EXPIRATION

March 30, 2004 - July 13, 2015



Backwardation and Contango



UX1 Index (CBOE Volatility Index Future) VIX Futures Daily 08JUL2014-23SEP2015

Copyright© 2015 Bloomberg Finance L.P.

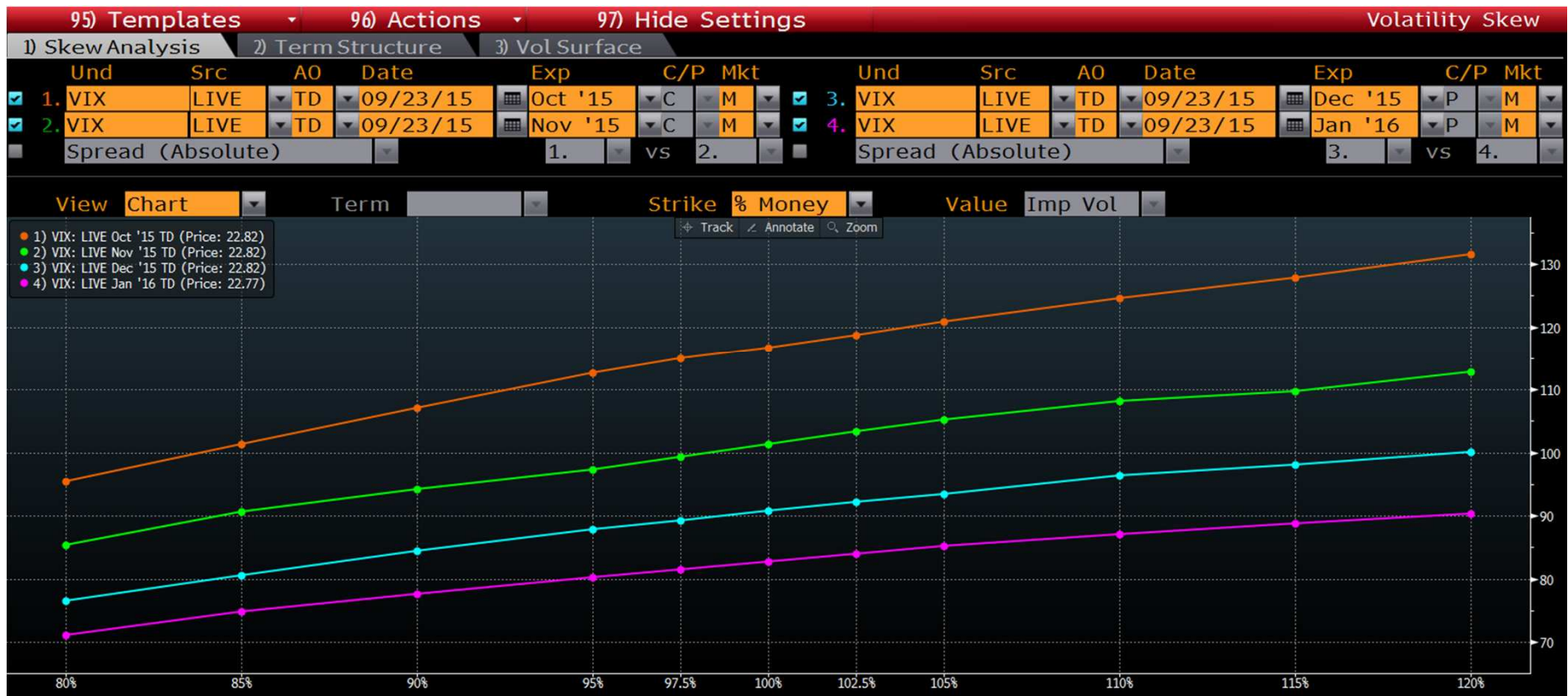
23-Sep-2015 11:18:52

On to Options

- **Skew Curves**
- **Mean Reversion**
- **Commodity Pricing**

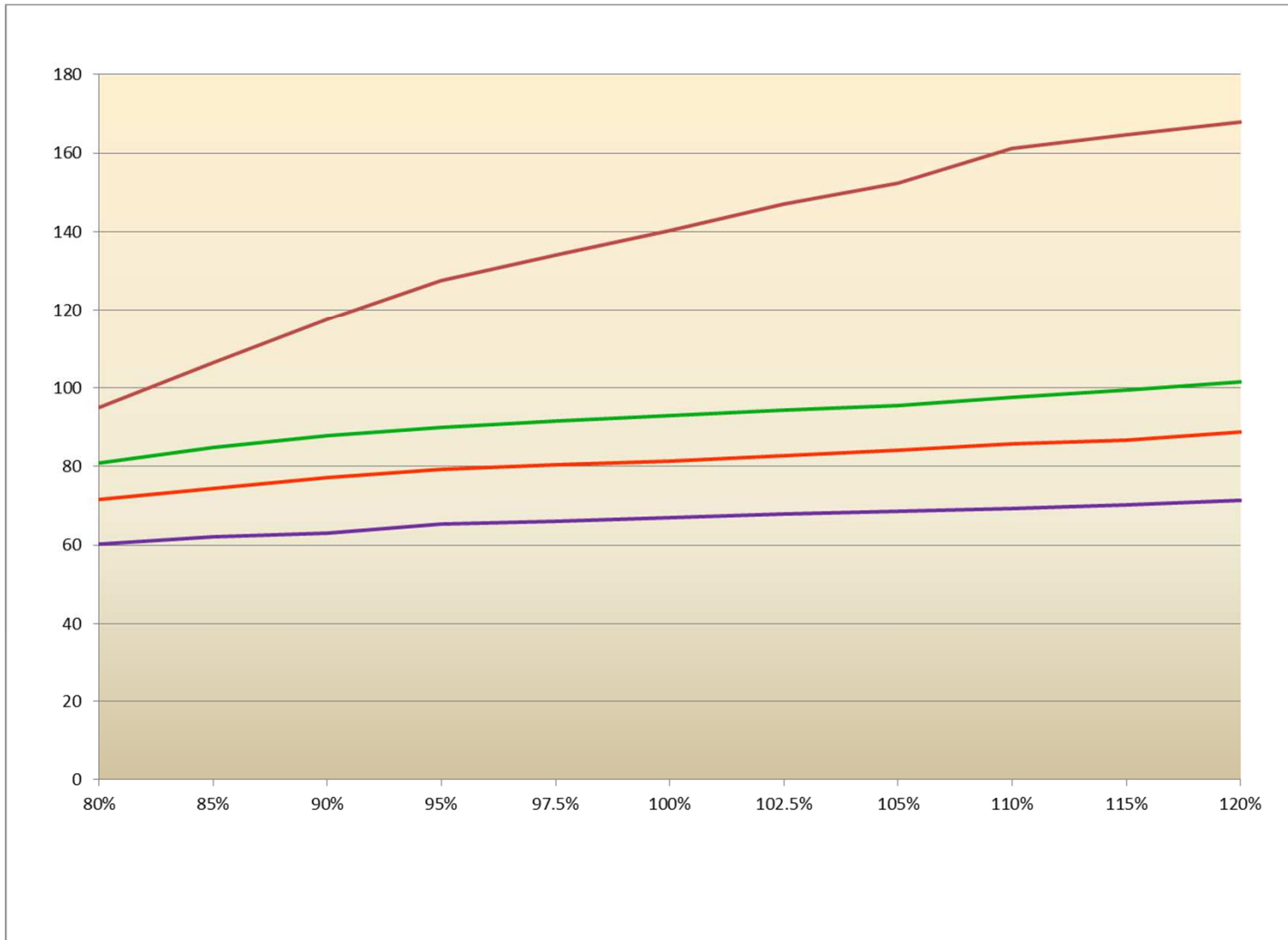
**Implications for Weekly volumes
in options and futures**

Volatility skews away from expiration



Note the “low” vol levels and the uniform gaps between months

Volatility skews near front month exp



Backwardation and Contango



UX1 Index (CBOE Volatility Index Future) VIX Futures Daily 08JUL2014-23SEP2015
 Copyright© 2015 Bloomberg Finance L.P. 23-Sep-2015 11:18:52

Option Pricing

Mean Reversion → Volatility Surface

Mean Reversion → Commodity pricing

***i.e.* VIX option market makers always
use the corresponding future.**

SPX/VIX Negative Correlation



SPX Index (S&P 500 Index) SPX vs VIX (inverted) Daily 18MAY2014-23SEP2015
Copyright© 2015 Bloomberg Finance L.P. 23-Sep-2015 11:16:15

Disclosures

Group One Trading, L.P. makes markets in VIX options and options on other CBOE volatility indexes, and may currently have a position in any or all of those products. Nothing in this presentation should be considered an endorsement or recommendation of any of those products by Group One Trading, L.P. or Dominic Salvino.

CBOE, CBOE Volatility Index and VIX are registered trademarks and Weeklys is a service mark of Chicago Board Options Exchange, Incorporated.