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**From:** jeffrey E. <jeevacation@gmail.com>  
**Sent:** Tuesday, August 9, 2016 3:42 PM  
**To:** Ens, Amanda  
**Subject:** Re: GEVI Highlights: Understanding when risk parity risk increases / buy the seasonal oil dip / own NKY calendar call

Take me off wide email

On Tuesday, 9 August 2016,=Ens, Amanda <[REDACTED]> wrote:  
<mailto:[REDACTED]>

Highlights from this week's Global Eq=ity Volatility Insights<=u>

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US: Quantifying the (bond-equity correlation) risks to risk parity

- \* Last week's sharp sell-off in JGBs renewed fears of for=ed selling by risk parity funds [Chart 1]
- \* While the drawdowns in US Treasuries, US equities, and =ltimately risk parity portfolios were small and short-lived [Chart 2], the latent risk remains worth monitoring, as
  - o (i) leverage is still near max levels across a variety =f risk parity parametrizations [Chart 3],
  - o (ii) bond allocations are historically elevated, and
  - o (iii) markets continue to be skeptical of a 2016 Fed hi=
- \* Hence we provide a simple scenario tool to help investo=s assess what relative moves in bonds & equities could catalyze signif=cant deleveraging by rules-based risk parity funds [Chart 4]<=p>
- \* For example, a -2% daily decline in the S&P 500 cou=led with a -0.6% fall in 10y Treasury prices (poor diversification) could =trigger a 25% deleveraging (of unlevered notional) today, whereas a -4% SPX drop and +1% Treasury rally (good diversification) would generate no selling pressure, =nderscoring the critical role played by bond-equity correlation in governi=g the severity of potential risk parity unwinds.

Consequently, risk parity portfolio volatility remained quite =uted

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Source: BofA Merrill Lynch Global Research. Daily data from=4-Jan-16 through 5-Aug-16. <=>

Source: BofA Merrill Lynch Global Research. Equity, fixed income, and commodity components within the hypothetical risk parity investment are represented by the S&P500, 10-Year US Treasury Bonds, a=d the S&P GSCI Index respectively. Risk parity allocations are determi=ed and rebalanced monthly using prior 12-month realized volatility and cor=elations. Historical volatility calculated using EWMA with a lambda equal to 0.94.

Source: BofA Merrill Lynch Global Research. Daily data from=31-Dec-12 through 27-Jun-16. Equity, fixed income, and commodity components within the hypothetical risk parity investment are represented =y the S&P500, 10-Year US Treasury Bonds, and the S&P GSCI Index, r=spectively. Risk parity allocations are determined and rebalanced monthly =sing prior 12-month realized volatility and correlations.

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Current theoretical deleveraging amounts (of unlevered notiona=) for an equity/fixed income risk parity portfolio with an 8% target volatility overlay and 2x max leverage cap<=b>

Assumes a trailing unlevered volatility of 3.1%, un=eved equity and fixed income weights of 22% and 78% respectively, and leverage at a maximum of 2.0 times

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Source: BofA Merrill Lynch Global Research. Data as of 5-Aug-16.=C2 Equity and fixed income components within the theoretical risk parity investment are represented by S&P 500 total return and 10-Year =S Treasury Futures total return. Risk parity allocations are determined monthly and rebalanced using prior 12-month realized volatility. =unlevered portfolio volatility for determining target volatility leverage measured using EWMA with lambda equal to 0.94.<=span>

Europe: Buy th= seasonal oil dip via bullish X-market risk reversals

Lev=red X-market risk reversal: Sell 1x USO 3M 25d (~88% strike) puts to fully=fund 2.1x SXEP (Oil & Gas equity) 25d (~106% strike) calls (indic.)=u>

=C2\* =C2\* T=e seasonal sell-off in oil presents a 'buy the dip' opport=nity according to our commodity strategists <<http://rsch.baml.com/r?q=E5QZt35kk=kdKaOOwNxYqA&e=amanda.ens%40baml.com&h=17nHwQ>> w=o expect prices to rebound to \$55/bbl by year end

=C2\* =C2\* B=fAML strategists have turned bullish Oil & Gas equities <<http://rsch.baml.com/r?q=b5eXX=e-1PQdKaOOwNxYqA&e=amanda.ens%40baml.com&h=Eyhodw>> given more CB (BoE) easing, attractive div yields and exposure to the EM recovery narrative

=C2\* =C2\* S=EP has been the worst performing SXXP sector over the last 1M, suggesting it has ample scope to=rally if it is to catch up to the broader equity market (1st chart)

=C2\* =C2\* U=O puts are rich vs. SXEP calls: The number of long SXEP 25d calls that can be fully funded by s=lling 1 short USO 25d put is near historical highs (90th %ile since '08, 2nd chart</=pan>)

=C2\* =C2\* S=EP calls would have offered better value than USO calls at current levels in terms of average h=storical payoffs as well as the frequency of positive returns (3rd chart)

=C2\* =C2\* C=PP has purchased an outsized proportion of Energy corporate bonds and this=has yet to feed through to equities according to our credit strategists <<http://rsch.baml.com/r?q=TZqUvbXCm=2ZLdmoUdWKDg&e=amanda.ens%40baml.com&h=V3m8UA>> (4th chart)<=span>

=C2\* =C2\* P=tential USO losses may be dampened if the recent \$/Oil correlation persist=: Since mid-2015 oil=drawdowns have largely coincided with USD weakening (5th chart)

=C2\* =C2\* 6th chart)

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SXEP (Oil & Gas equity) has been the=worst performing Stoxx 600 sector over the last 1M

The leverage provided by the X-market ri=k reversal (long SXEP call / short USO put) is attractive from a historica=standpoint

SXEP calls would have generated a higher=average payoff and more frequent positive returns vs. USO calls (when size=for an upfront cost equal to the current price of the USO 3M 25d put)<=u>

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Source: BofA Merrill Lynch Global Resear=h. Data from 7-Jul-16 to 5-Aug-16.

Source: BofA Merrill Lynch Global Resear=h. Data as of 5-Aug-16, using indicative mid prices. \*Percentiles since Ja=-08.

Source: BofA Merrill Lynch Global Resear=h. Data from 1-Jan-16 to 5-Aug-16. Backtesting is hypothetical in nature and r=flects application of the screen prior to its introduction. It is not inte=ded to be indicative of future performance.

Number of bonds purchased by the ECB in =heir CSPP programme by sector

Oil drawdowns have recently coincided wi=h \$ weakening

Selling the USO 25d put (~8.7 strike as =f 5-Aug) to buy the SXEP 42d call (~280 strike as of 5-Aug) for ~0 provide= early upside participation and a ~12% downside buffer on the short USO pu= leg

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Source: BofA Merrill Lynch Global Research.

Source: BofA Merrill Lynch Global Research. Data from 18-Apr-07 to 5-Aug-16.

Source: BofA Merrill Lynch Global Research. Data from 1-Jan-16 to 5-Aug-16. Backtesting is hypothetical in nature and reflects application of the screen prior to its introduction. It is not intended to be indicative of future performance.

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Asia Pacific: Own NKY calendar =all going into the uncertainty Sep BOJ

- \* \* =A0 Trade update: Closing the NKY Aug/Sep put calendar trade opened on 25-Jul
- \* \* =A0 NKY & USDJPY 1Mth vols are down to YTD low:=Pricing in a slow summer
- \* \* =A0 USDJPY 2M-1M term structure at its steepest &am=; NKY's in its 98th %-ile since 2011
- \* \* =A0 BofA ML: BoJ plans for Sep16 'comprehensive=assessment' create uncertainty
- \* \* =A0 Market expectation for the Sep BOJ in terms of =wd vol is the near its lows YTD
- \* \* =A0 A further squeeze in US and Japanese yields is =ost positive Japan in Asia
- \* \* =A0 Buy 1x NKY Oct 17500 call,=short 0.65x Sep 17250 call: Gamma neutral, long vol Indicative=pricing (as of 1-Aug-16, ref: 9120):
  - \* Buy 1x NKY Oct 17500 call: 1.13% (¥=87) (iv: 19.2, delta: 24%, gamma: 3.8%)
  - \* Sell 0.65x NKY Sep 17250 call: =A0 0.66% (¥110) (iv: =6.9, delta: 23%, gamma: 5.9%)
  - \* Net: =C2 =A0 =C2 =A0 =wbr> 0.70% (¥116) (delta: +9, veg=: 0.08%)

Japanese equity volatility has dropped =o YTD lows; USDJPY short-dated vol also retraced to near YTD low levels=/u>

USDJPY 2M-1M ATM term structure (1.7%) =s at its 5-year high while the NKY 2M-1M term structure (1.5%) is at its 9=th percentile

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Source: BofA Merrill-Lynch Global Research. Daily data from 5-Jan-16 to 5-Aug-16<=span>

Source: BofA Merrill Lynch Global Research.

Current NKY Sep-Oct ATM volatility is cheap relatively to implied volatility going into previous BOJ meetings in 2=16

The Nikkei is the most sensitive to rising USD and JPY rates among Asian indices

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Source: BofA Merrill-Lynch Global Research.

Source: BofA Merrill Lynch Global Research.=C2 Weekly correlation since 2010

Mark-to-Market of the long 1x NKY Oct 1=500 call, short NKY Sep 17250 call structure

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Source: BofA Merrill-Lynch Global Research. Assume volatility stays constant

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Week in Review: US equities at new all-time highs on upbeat employment report<=u>

\* =C2\* The SPX vol term-structure steepened materially on lower shorter dated implied vol with the 1yr-1m ATM implied vol spread reaching its highest level in almost 4 years [Chart 1]

\* =C2\* Near multi-year flat call skew on Biotech (IBB) makes long call spreads an attractive option strategy to initiate or replace long positions to lock-in profits from the recent strong rally [Chart 2]<=span>

\* =C2\* The 2016 election move implied by the VIX term structure is, in our estimate\*, approx. 1.4%... [Chart 3]

\* =C2\* ...which is notably very close to the typical SPX daily realized move post-elections since 1928 [Chart 4]

The SPX vol term-structure steepened materially on lower shorter dated implied vol with the 1yr-1m ATM implied vol spread reaching its highest level in almost 4 years

Near multi-year latent call skew on Biotech (IBB) makes long call spreads an attractive option strategy to initiate or replace long positions to lock-in profits from the recent strong rally<span lang="EN-GB">

Source: BofA Merrill-Lynch Global Research. Daily data from 8-Aug-12 to 8-Aug-16.<span lang="EN-GB">

Source: BofA Merrill-Lynch Global Research. Daily data from 5-Aug-11 to 5-Aug-16.

The 2016 election move implied by the VIX term structure is, in our estimate, approx. 1.4%=>

...which is notably very close to the typical SPX daily realized move post-elections since 1928

Source: BofA Merrill-Lynch Global Research. Daily data from 2-Jun-09 to 5-Aug-16.

Source: BofA Merrill-Lynch Global Research. Data from Nov-28 to Aug-16.

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