SOCIETE GENERALE
Corporate & Investment Banking

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FLOW STRATEGY & SOLUTIONS

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TRADE IDEA EQUITY

Smart hedging

Appearing Put Spread on SPX

Flow Strategy & Solutions

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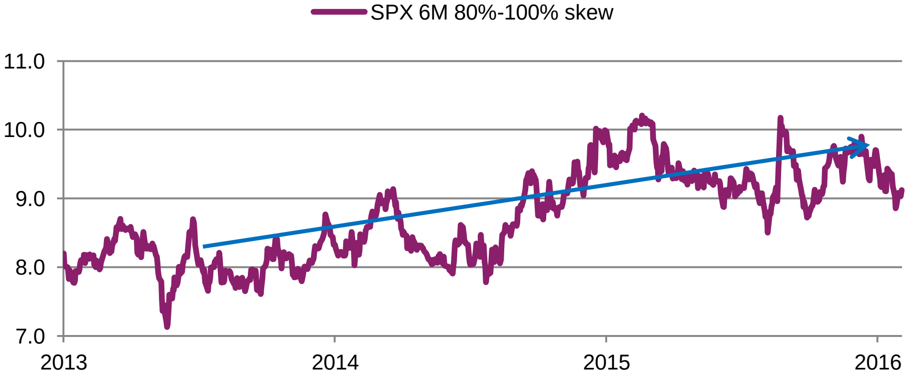
Rationale

- The **S&P500 is down -6%** in 2016, one of its worst starts of the year.
- Global macroeconomic concerns weigh on markets including China's slowing growth, steep declines in oil prices and divergence in central bank monetary policy.
- We recommend buying market wide hedges to protect against further headwinds.
- Is this the market bottom? No one seems to agree on when the market will reach a bottom and the proof is the **very high intraday volatility**: YTD the S&P500 has been trading in a 2.3% range intraday in 2016 on average vs. 1.1% in 2015.

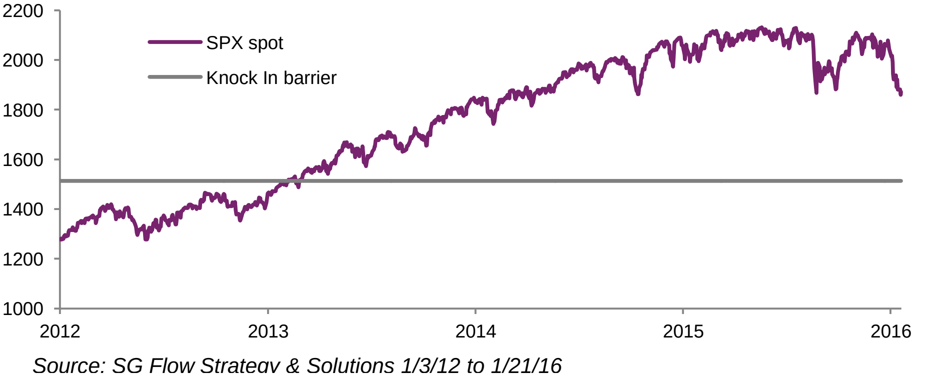
Implementation

- As US equity markets continue to sell off, implied volatility and convexity climb higher, we recommend **buying Appearing Put Spread on SPX.**
- **Buy SPX ATM Put and Sell 90% Put down-and-in at 80% with continuous observations.**
- Appearing put spreads allow investors to:
  - Benefit from high skew
  - Avoid buying volatility outright at a high level
  - Possibly generate an additional 10% in return for an additional 30bps in premium versus a vanilla put spread

Graph 1: SPX's high skew levels allow investors to benefit from selling downside protection. We observe below that SPX's skew has been steadily increasing since mid 2013.



Graph 2: Since 2013, SPX has not reached a level that would trigger the knock in barrier.



Source: SG Flow Strategy & Solutions 1/3/12 to 1/21/16

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Appearing Put Spread on SPX

Payoff Description

On the initial trade date, the investor pays the premium and the Initial Value of the SPX is recorded.

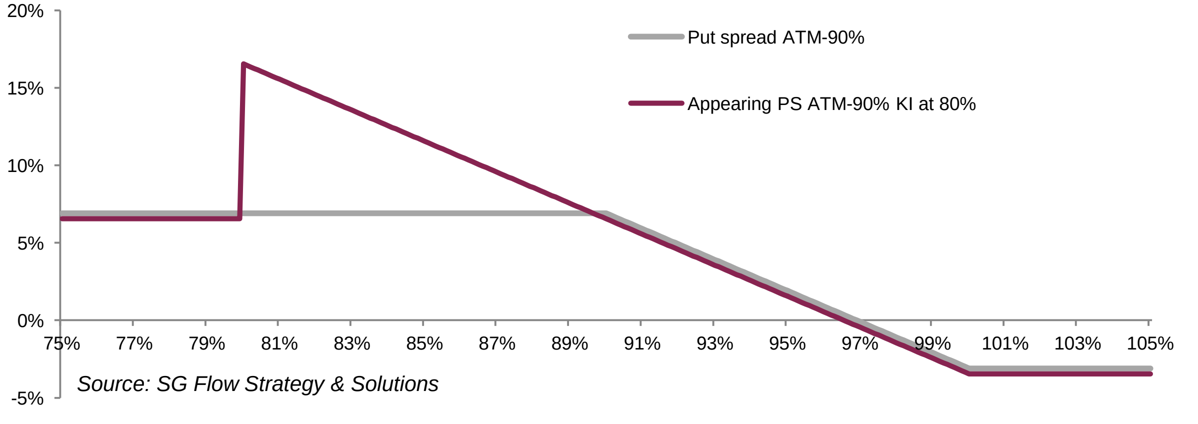
The appearing Put Spread has continuous observations. If at any time the Performance of SPX is less than or equal to 80% of the Initial Value of SPX, the knock-in barrier is triggered and remains throughout the life of the product.

At maturity:

- If the knock-in has not been triggered, the investor receives the payoff of an ATM put.
- If the knock-in has been triggered, the investor receives the payoff of an ATM-90% put spread.

INDICATIVE TERMS Subject to change due to market conditions	
FORMAT	OTC Option
COUNTERPARTY	SG
CURRENCY	USD
STRIKES	ATM-90%
OBSERVATION	Continuos
KNOCK-IN BARRIER	80%
PREMIUM	Mar 16: 2.60% Jun 16: 3.23%
VANILLA PUT SPREAD PREMIUM	Mar-16: 2.30% Jun-16: 2.93%

Graph 3: P/L of Appearing Put Spread



Source: SG Flow Strategy & Solutions

The figures used in this example are given for purely indicative purposes. It allows an understanding of how the product would have performed during different market stages over previous years. These illustrations make no guarantees as to future returns and have no contractual value. The figures are presented excluding taxes and expenses (an investor might incur depending on the investment regulatory environment during that time).

RISKS AND CONSIDERATIONS*

- Investor may lose the initial premium.
- A change in volatility can lead to adverse mark-to-market fluctuation.
- Certain exceptional market circumstances may have a negative effect on the liquidity, resulting in wider bid-offer spreads.
- The investor assumes counterparty risk associated to SG.

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