The derivatives market is saying some odd things these days...

- The market doesn’t believe in fatter growth tails
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- The market thinks EUR and SX5E will keep moving apart
- The market thinks China tail risk is going up rather than down
THE MARKET DOESN’T BELIEVE IN FATTER GROWTH TAILS
US policy uncertainty is high

- **Pro-market (corp tax cuts, middle class tax cuts, infra spending)**
  - Easy through Congress
    - Effective
  - Hard / not through Congress
    - Ineffective

- **Market Neutral (school choice, UN payments, Supreme Court)**
  - Easy through Congress
    - Ineffective
  - Hard / not through Congress
    - Effective

- **Market Negative (trade war, immigration clamp-down)**
  - Easy through Congress
    - Effective
  - Hard / not through Congress
    - Ineffective

Illustrative purposes only. The Tradability and Difficulty scores are subjective opinions of the authors only. Trump’s Contract with the American Voter. [https://assets.donaldtrump.com/_landings/contract/O-TRU-102316-Contractv02.pdf](https://assets.donaldtrump.com/_landings/contract/O-TRU-102316-Contractv02.pdf).
We expect fatter growth tails. Sector vols disagree.

Cons Disc is 5x more sensitive to US growth than Utilities, but trades at a ~1.5x discount.
Trump baskets still reasonable on a GARP basis

Source: JPMorgan Securities, Bloomberg as of December 1, 2016.
TOPIX seems more sensitive to US growth than SPX

\[
y = 1.127x + 0.0115
\]

\[
y = 4.1202x - 0.0551
\]

Source: JPMorgan Securities, Bloomberg as of December 1, 2016.
THE MARKET THINKS JAPAN’S TAILS ARE LESS LIKELY THAN US TAILS
WHAT PROBABILITY DO YOU PUT ON NKY > ¥25000 IN 5YRS?
WHAT PROBABILITY DO YOU PUT ON NKY < ¥10000 IN 5YRS?
NKY long-dated vol looks low especially relative to SPX

Source: JPMorgan Securities/STAR as of December 1, 2016.
THE MARKET PRICES NKY > ¥25000 @ 14%, NKY < ¥10000 @ 20%
Japan’s entitlement gap has been widening for decades

Social Security Benefits and Contributions
(In percent of GDP)

Sources: National Institute of Population and Social Security Research.

Leverage to global growth could send Japanese equities higher
THE MARKET BELIEVES DIVIDEND YIELDS SHOULD BE ABOVE BOND YIELDS
Market priced dividends and rates imply upside to SX5E

### SX5E Dividend Discount Model assuming no perpetual growth & current market rates

<table>
<thead>
<tr>
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<tr>
<td>Div Swap Levels</td>
<td>119</td>
<td>115</td>
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<td>102</td>
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<td>94</td>
<td>91</td>
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<td>Present Value</td>
<td>119</td>
<td>115</td>
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<td>108</td>
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<td>Par Swap Rate</td>
<td>-0.35%</td>
<td>-0.19%</td>
<td>-0.14%</td>
<td>-0.09%</td>
<td>0.00%</td>
<td>0.11%</td>
<td>0.23%</td>
<td>0.34%</td>
<td>0.47%</td>
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<td>Cumulative</td>
<td>119</td>
<td>234</td>
<td>348</td>
<td>456</td>
<td>557</td>
<td>654</td>
<td>746</td>
<td>835</td>
<td>918</td>
<td>997</td>
<td>7,271</td>
</tr>
</tbody>
</table>

### SPX Dividend Discount Model assuming +70bps perpetual growth & current market rates

<table>
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<td>Div Swap Levels</td>
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<td>51</td>
<td>52</td>
<td>54</td>
<td>55</td>
<td>56</td>
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<td>3,231</td>
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<tr>
<td>Present Value</td>
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<td>48</td>
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<td>48</td>
<td>48</td>
<td>2,577</td>
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<tr>
<td>Par Swap Rate</td>
<td>0.93%</td>
<td>1.13%</td>
<td>1.32%</td>
<td>1.53%</td>
<td>1.69%</td>
<td>1.82%</td>
<td>1.93%</td>
<td>2.02%</td>
<td>2.10%</td>
<td>2.16%</td>
<td>2.49%</td>
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<tr>
<td>Cumulative</td>
<td>46</td>
<td>92</td>
<td>140</td>
<td>188</td>
<td>236</td>
<td>283</td>
<td>331</td>
<td>379</td>
<td>426</td>
<td>474</td>
<td>3,051</td>
</tr>
</tbody>
</table>

Source: JPMorgan Securities/STAR as of December 1, 2016.
Pre-crisis bond yields were typically higher than dividend yields

Source: Bloomberg as of December 1, 2016.
Europe’s earnings yield is one of the highest relative local bond yields globally.

European bond yields are a fraction of earnings yields, => equities look attractive vs rates.

Source: JPMorgan Securities, Bloomberg as of December 1, 2016.
European forwards are steeply downward sloping, cheapen upside.

Source: JPMorgan Securities/STAR as of December 1, 2016.
European fundamentals don’t triangulate

Current SX5E Level: €3030

Market Implied Dividend Yield: 3.3%

This doesn’t work

Market 10y Swap Rate: 75bps

Source: JPMorgan Securities as of December 1, 2016.
For illustrative purposes only.
The market thinks downside is more volatile than upside.
SPX put vol trades at a much higher vol than call vol

Source: JPMorgan Securities/STAR as of December 1, 2016.
Downside in SPX is persistently more expensive than NKY, SX5E

Source: JPMorgan Securities/STAR as of December 2, 2016.
Higher volatility may come with higher multiples

Source: Bloomberg as of December 1, 2016.
Higher multiples => higher vol relationship has held historically

It’s not immediately clear downside vol *should* be more expensive

Source: Bloomberg, JPMorgan Securities as of December 1, 2016.
Low upside vol offers an opportunity to get long delta cheaply

Figure 1: S&P 500 performance has been closely linked to EPS growth in recent years
Actual EPS prior to 3Q2016, estimates thereafter


Pricing is indicative only as of December 1, 2016.
THE MARKET THINKS EUR AND SX5E WILL KEEP MOVING APART
Equities are positively correlated with currency in most countries

Source: Bloomberg, JPMorgan Securities as of December 1, 2016.
SX5E/EUR correlation has realized very positive from 2006-2012

Source: JPMorgan Securities/STAR as of December 1, 2016.
Negative SX5E/EUR correlation offers a cheap crash hedge

<table>
<thead>
<tr>
<th>Index</th>
<th>Asset Info</th>
<th>1y Implied Vol</th>
<th>10:1 Strike (%)</th>
<th>10:1 Strike (EUR)</th>
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<td>SX7E Index</td>
<td>EU Financials</td>
<td>31.10%</td>
<td>50.2%</td>
<td>53.5</td>
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<td>FTSEMIB Index</td>
<td>Italian Equities</td>
<td>26.50%</td>
<td>55.3%</td>
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<td>IBEX Index</td>
<td>Spanish Equities</td>
<td>21.70%</td>
<td>61.0%</td>
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<td>CAC Index</td>
<td>French Equities</td>
<td>19.70%</td>
<td>65.9%</td>
<td>3005</td>
</tr>
<tr>
<td>SX5E Index</td>
<td>EU Equities</td>
<td>20.40%</td>
<td>66.3%</td>
<td>2010</td>
</tr>
<tr>
<td>DAX Index</td>
<td>German Equities</td>
<td>20.50%</td>
<td>69.3%</td>
<td>7300</td>
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<tr>
<td>SMI</td>
<td>Swiss Equities</td>
<td>16.30%</td>
<td>70.4%</td>
<td>5480</td>
</tr>
</tbody>
</table>

Binary puts look expensive relative to a dual binary that pays 10:1 if: SX5E < 95% and EURUSD < 97%

Source: JPMorgan Securities/as of December 1, 2016.
All pricing is indicative only.
THE MARKET THINKS CHINA TAIL RISK IS GOING UP RATHER THAN DOWN
China variance has been getting more expensive relative to SPX recently

Source: JPMorgan Securities/STAR as of December 1, 2016.
Variance typically prices rich to realized in China

Source: JPMorgan Securities/STAR as of December 2, 2016.
*YTD, through December 2, 2016. 1y variance. **2017 as of December 2, 2106.
For the last year, HSCEI variance has traded at a large premium to vanilla vol
Post-crisis realized has been relatively well behaved despite numerous shocks.

Source: JPMorgan Securities/STAR as of December 1, 2016.
China growth is firming

**Figure 11: After falling from 2010 nominal GDP growth is recovering**


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