



Figure 29: Simulated P/L of 36M options after 12M have passed under different rate and spot change scenarios (assumes vols slide down the curve)

Change in Rates	% Change in Spot				
	-10%	-5%	0%	5%	10%
-0.50	-64%	-46%	-25%	0%	29%
0.00	-61%	-43%	-21%	5%	35%
0.50	-59%	-40%	-17%	10%	40%
1.00	-56%	-37%	-13%	15%	46%
1.50	-54%	-34%	-9%	19%	52%
2.00	-51%	-30%	-5%	24%	57%
2.50	-48%	-27%	-1%	29%	63%

Source: Deutsche Bank

Figure 30: Simulated P/L of 18M options after 12M have passed under different rate and spot change scenarios (assumes vols slide down the curve)

Change in Rates	% Change in Spot				
	-10%	-5%	0%	5%	10%
-0.50	-92%	-77%	-49%	-7%	48%
0.00	-91%	-76%	-47%	-4%	51%
0.50	-91%	-75%	-46%	-2%	54%
1.00	-90%	-74%	-44%	0%	57%
1.50	-90%	-73%	-42%	3%	60%
2.00	-89%	-72%	-41%	5%	63%
2.50	-89%	-71%	-39%	8%	66%

Source: Deutsche Bank

Psi – dividend yield sensitivity

The call's price sensitivity to dividend yield changes is slightly higher than its rate sensitivity since dividend yield changes only affect the forward and not the discount rate. However, dividend yields do not vary as much as rates: we can see in Figure 7, the SPX implied dividend yield has been between 1.6% and 2.8% historically. Figure 31 and Figure 32 show the simulated P/Ls under different rate and dividend yield change scenarios after one year has passed in the life of the trade, all else equal. Not surprisingly, the dividend yield impact is larger for longer-dated options.

Figure 31: Simulated P/L of 36M options after 12M have passed under different dividend yield and spot change scenarios (assumes vols slide down the curve)

Change in Div Yields	% Change in Spot				
	-10%	-5%	0%	5%	10%
-0.75	-57%	-38%	-14%	13%	44%
-0.50	-58%	-40%	-17%	10%	41%
-0.25	-60%	-41%	-19%	8%	38%
0.00	-61%	-43%	-21%	5%	35%
0.25	-63%	-45%	-24%	2%	32%
0.50	-64%	-47%	-26%	0%	29%
0.75	-66%	-49%	-28%	-3%	26%

Source: Deutsche Bank

Figure 32: Simulated P/L of 18M options after 12M have passed under different dividend yield and spot change scenarios (assumes vols slide down the curve)

Change in Div Yields	% Change in Spot				
	-10%	-5%	0%	5%	10%
-0.75	-91%	-74%	-45%	-1%	55%
-0.50	-91%	-75%	-46%	-2%	54%
-0.25	-91%	-75%	-47%	-3%	52%
0.00	-91%	-76%	-47%	-4%	51%
0.25	-91%	-76%	-48%	-6%	50%
0.50	-92%	-77%	-49%	-7%	48%
0.75	-92%	-77%	-50%	-8%	47%

Source: Deutsche Bank