

# Appendix A: Backtest Results

Figure 34: Comparing performance under rising and falling markets: Equity vs. various 18M call option strategies

	Dec-02 to Oct-07		Oct-07 to Mar-09		Mar-09 to Sep-13		Apr-13 to Sep-13		Dec-02 to Sep-13			Dec-02 to Apr-13			
	Return	Vol	Return	Vol	Return	Vol	Return	Vol	Return	Vol	Ret/Vol	Return	Vol	Ret/Vol	
<b>Equity</b>	13.3%	12.8%	-55.3%	37.8%	22.3%	18.7%	18.9%	11.3%	8.0%	20.3%	39.2%	7.5%	20.6%	36.6%	
<b>6M Roll</b>	<b>Outright: ATM</b>	6.4%	6.8%	-24.5%	10.4%	8.8%	9.0%	10.8%	7.7%	3.3%	8.4%	39.0%	3.0%	8.4%	35.4%
	<b>Outright: 9%</b>	6.5%	6.8%	-18.6%	8.1%	7.1%	8.6%	11.9%	8.1%	3.4%	7.8%	43.7%	3.1%	7.8%	39.5%
	<b>Outright: 5%</b>	4.5%	4.8%	-10.8%	4.7%	4.0%	6.0%	9.0%	6.8%	2.3%	5.3%	42.4%	2.0%	5.3%	37.9%
	<b>Outright: 3%</b>	3.5%	3.5%	-8.2%	3.7%	2.4%	4.5%	6.5%	5.7%	1.5%	4.0%	36.8%	1.3%	3.9%	32.6%
	<b>Spread: ATM - 3%</b>	5.0%	3.4%	-13.8%	6.7%	6.4%	5.1%	4.5%	2.4%	3.1%	4.7%	64.9%	3.0%	4.8%	62.8%
	<b>Spread: 9% - 3%</b>	5.1%	3.4%	-8.2%	4.3%	4.8%	4.4%	5.6%	2.9%	3.2%	4.0%	79.9%	3.1%	4.0%	76.9%
	<b>Spread: ATM - 1%</b>	6.0%	5.1%	-20.6%	9.2%	8.1%	7.3%	7.9%	4.5%	3.3%	6.8%	49.4%	3.2%	6.9%	46.3%
	<b>Spread: 9% - 1%</b>	6.1%	5.2%	-14.8%	6.8%	6.5%	6.7%	9.0%	5.0%	3.5%	6.1%	57.0%	3.3%	6.2%	53.1%
	<b>Spread: 5% - 1%</b>	4.1%	3.1%	-7.0%	3.4%	3.4%	4.0%	6.1%	3.5%	2.3%	3.6%	64.9%	2.2%	3.6%	60.8%
	<b>Spread: ATM - 1M 2%</b>	7.7%	6.7%	-22.8%	10.4%	7.6%	7.9%	-6.4%	7.6%	3.6%	7.8%	45.8%	4.0%	7.8%	50.8%
<b>Spread: 9% - 1M 2%</b>	7.9%	6.8%	-16.8%	8.1%	6.1%	7.5%	-4.9%	8.0%	3.8%	7.3%	52.6%	4.2%	7.2%	57.6%	
<b>Spread: 5% - 1M 2%</b>	5.9%	5.0%	-9.7%	5.0%	3.3%	5.4%	-9.4%	7.2%	2.7%	5.2%	52.3%	3.2%	5.1%	62.6%	
<b>12M Roll</b>	<b>Outright: ATM</b>	6.7%	7.4%	-19.4%	9.0%	9.4%	10.0%	13.4%	8.7%	4.4%	8.8%	49.9%	4.0%	8.8%	45.9%
	<b>Outright: 9%</b>	6.7%	7.4%	-14.3%	7.1%	6.9%	9.1%	14.2%	9.2%	4.0%	8.1%	48.8%	3.6%	8.1%	44.2%
	<b>Outright: 5%</b>	4.3%	5.1%	-8.6%	4.9%	3.0%	6.0%	11.8%	7.9%	2.0%	5.5%	37.0%	1.7%	5.4%	30.7%
	<b>Outright: 3%</b>	3.0%	3.6%	-6.2%	3.4%	1.7%	4.4%	9.8%	7.0%	1.2%	3.9%	31.1%	0.9%	3.7%	23.5%
	<b>Spread: ATM - 3%</b>	5.9%	4.0%	-10.8%	5.8%	7.8%	6.3%	4.2%	2.2%	4.5%	5.4%	83.4%	4.5%	5.5%	82.4%
	<b>Spread: 9% - 3%</b>	5.8%	4.0%	-5.9%	3.8%	5.3%	5.2%	5.1%	2.7%	4.1%	4.5%	89.8%	4.0%	4.6%	87.9%
	<b>Spread: ATM - 1%</b>	6.8%	5.8%	-15.6%	7.5%	8.2%	9.1%	-4.9%	8.6%	4.4%	7.6%	58.0%	4.8%	7.5%	63.2%
	<b>Spread: 9% - 1%</b>	6.8%	5.8%	-10.5%	5.3%	5.6%	8.0%	-3.9%	8.8%	4.0%	6.8%	58.5%	4.3%	6.7%	63.9%
	<b>Spread: 5% - 1%</b>	4.4%	3.5%	-4.8%	2.8%	1.8%	5.1%	-6.9%	8.4%	2.0%	4.2%	48.7%	2.4%	3.9%	60.8%
	<b>Spread: ATM - 1M 2%</b>	7.9%	7.2%	-16.2%	8.3%	7.4%	7.9%	-3.3%	7.9%	4.5%	7.7%	58.5%	4.8%	7.7%	62.6%
<b>Spread: 9% - 1M 2%</b>	7.9%	7.3%	-11.7%	6.8%	5.5%	7.5%	-2.4%	8.6%	4.3%	7.3%	58.8%	4.6%	7.3%	62.8%	
<b>Spread: 5% - 1M 2%</b>	5.6%	5.4%	-7.3%	5.3%	2.4%	5.6%	-6.3%	8.6%	2.5%	5.5%	46.3%	2.9%	5.3%	54.2%	
<b>18M Roll</b>	<b>Outright: ATM</b>	7.8%	8.7%	-15.9%	7.9%	10.3%	13.7%	10.7%	9.9%	5.7%	11.0%	52.0%	5.5%	11.1%	50.1%
	<b>Outright: 9%</b>	7.5%	8.5%	-11.4%	5.9%	7.0%	12.5%	11.8%	10.2%	4.7%	10.1%	46.7%	4.5%	10.1%	44.0%
	<b>Outright: 5%</b>	4.7%	6.4%	-5.8%	3.6%	1.8%	8.3%	8.7%	10.2%	2.1%	7.0%	29.7%	1.8%	6.9%	26.6%
	<b>Outright: 3%</b>	2.9%	5.0%	-4.0%	2.8%	1.3%	6.0%	5.9%	9.9%	1.3%	5.2%	25.5%	1.2%	5.0%	23.3%
	<b>Spread: ATM - 3%</b>	7.1%	4.5%	-9.5%	5.3%	9.1%	9.5%	5.2%	1.8%	5.7%	7.2%	79.9%	5.7%	7.3%	78.8%
	<b>Spread: 9% - 3%</b>	6.7%	4.2%	-5.3%	3.3%	5.8%	8.1%	6.3%	2.2%	4.7%	6.1%	77.6%	4.7%	6.2%	75.4%
	<b>Spread: ATM - 1%</b>	8.2%	7.6%	-13.3%	6.9%	10.8%	12.4%	12.5%	4.3%	6.4%	9.9%	65.3%	6.2%	10.0%	62.0%
	<b>Spread: 9% - 1%</b>	7.9%	7.3%	-8.9%	4.8%	7.4%	11.1%	13.6%	4.7%	5.5%	8.9%	61.1%	5.1%	9.0%	56.7%
	<b>Spread: 5% - 1%</b>	5.1%	5.2%	-3.3%	2.4%	2.3%	6.6%	10.7%	4.1%	2.8%	5.6%	50.2%	2.5%	5.7%	44.3%
	<b>Spread: ATM - 1M 2%</b>	8.9%	8.2%	-11.0%	6.3%	7.4%	9.6%	-5.3%	8.0%	5.6%	8.7%	64.9%	6.1%	8.7%	69.7%
<b>Spread: 9% - 1M 2%</b>	8.6%	8.1%	-7.9%	5.1%	5.3%	9.2%	-4.6%	8.8%	5.0%	8.3%	60.3%	5.4%	8.3%	65.0%	
<b>Spread: 5% - 1M 2%</b>	6.0%	6.4%	-3.4%	3.4%	1.5%	7.3%	-9.9%	10.5%	2.8%	6.5%	43.3%	3.3%	6.3%	52.6%	

Source: Deutsche Bank

