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## 7 Apêndices

Apêndice 1: Resultado ano a ano dos testes de média não-zero para o prêmio de risco por volatilidade. Metodologia similar a Sarwar (2002).

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Todos	Média	-0,145	-0,067	-0,059	-0,178	-0,127	-0,105	-0,121	-0,027	0,097	-0,045	-0,042	-0,066	-0,063
	DP	0,113	0,791	0,808	0,149	0,211	1,065	0,244	1,932	2,613	0,195	0,532	0,259	0,193
	N	431	383	293	376	434	661	619	814	946	1.174	947	705	602
	Valor-t	-26,79***	-1,66*	-1,25	-23,18***	-12,55***	-2,53**	-12,29***	-0,39	1,14	-7,98***	-2,45**	-6,73***	-7,95***
ATM	Média	-0,149	-0,012	-0,021	-0,181	-0,107	-0,107	-0,139	0,107	0,346	-0,030	-0,075	-0,083	-0,078
	DP	0,109	1,019	1,080	0,122	0,260	0,977	0,162	3,157	4,594	0,209	0,199	0,195	0,187
	N	232	217	137	160	214	244	227	303	285	272	325	251	244
	Valor-t	-20,78***	-0,17	-0,23	-18,73***	-6,01***	-1,71*	-12,95***	0,59	1,27	-2,39**	-6,79***	-6,78***	-6,50***
ITM	Média	-0,159	-0,278	-0,110	-0,108	-0,199	-0,216	-0,165	-0,137	-0,179	-0,050	-0,182	-0,287	-0,121
	DP	0,092	0,349	0,791	0,292	0,327	0,182	0,201	0,405	0,549	0,270	0,281	0,305	0,378
	N	30	26	30	10	16	32	37	42	124	64	64	29	47
	Valor-t	-9,49***	-4,06***	-0,76	-1,17	-2,44**	-6,74***	-4,99***	-2,19**	-3,64***	-1,49	-5,17***	-5,06***	-2,19**
OTM	Média	-0,138	-0,113	-0,088	-0,179	-0,143	-0,094	-0,104	-0,103	0,028	-0,050	-0,007	-0,040	-0,042
	DP	0,121	0,257	0,327	0,158	0,123	1,158	0,287	0,153	0,859	0,184	0,666	0,280	0,150
	N	169	140	126	206	204	385	355	469	537	838	558	425	311
	Valor-t	-14,88***	-5,20***	-3,02***	-16,25***	-16,57***	-1,60	-6,83***	-14,55***	0,77	-7,89***	-0,26	-2,94***	-4,91***

Nota: \*\*\* 1% , \*\* 5% e \*10% de nível de significância.  $H_0$ : Média = 0. As classes das opções são divididas da seguinte maneira: ATM se a razão preço a vista/preço de exercício estiver entre 0,98 e 1,02 exclusive; ITM se a razão preço a vista/preço de exercício  $\leq 0,98$  e OTM se a razão preço a vista/preço de exercício  $\geq 1,02$ .

Apêndice 2: Resultado ano a ano dos testes de média não-zero para o prêmio de risco por volatilidade. Metodologia similar a Bakshi &amp; Kapadia (2003).

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Todos	Média	-0,005	-0,008	0,041	-0,023	-0,007	-0,011	-0,010	-0,009	-0,018	-0,012	-0,007	0,001	-0,006
	DP	0,015	0,039	0,190	0,039	0,028	0,028	0,035	0,019	0,059	0,029	0,028	0,035	0,020
	N	56	72	61	64	68	86	83	106	144	182	126	101	90
	Valor-t	-2,30**	-1,63	1,70*	-4,73***	-1,96*	-3,67***	-2,59**	-4,82***	-3,67***	-5,58***	-2,85***	0,29	-2,92***
ATM	Média	-0,007	-0,005	0,059	-0,028	-0,010	-0,021	-0,020	-0,011	-0,011	-0,015	-0,011	0,003	-0,012
	DP	0,016	0,040	0,185	0,050	0,038	0,041	0,028	0,022	0,056	0,041	0,028	0,048	0,018
	N	25	34	26	26	28	28	21	27	32	36	35	33	29
	Valor-t	-2,17**	-0,77	1,64	-2,82***	-1,36	-2,72**	-3,24***	-2,63**	-1,09	-2,14**	-2,24**	0,39	-3,64***
ITM	Média	0,000	0,004	0,076	-0,080	0,013	-0,026	-0,006	-0,032	-0,020	-0,027	-0,011	0,049	0,005
	DP	0,030	0,069	0,317	0,057	0,051	0,045	0,080	0,032	0,099	0,065	0,062	0,066	0,036
	N	7	11	11	4	4	9	13	15	37	18	18	7	18
	Valor-t	-0,03	0,21	0,79	-2,78**	0,52	-1,72	-0,28	-3,92***	-1,21	-1,74*	-0,74	1,97*	0,62
OTM	Média	-0,003	-0,015	0,006	-0,013	-0,007	-0,003	-0,007	-0,003	-0,020	-0,009	-0,004	-0,006	-0,007
	DP	0,003	0,017	0,103	0,014	0,013	0,004	0,007	0,006	0,024	0,012	0,007	0,010	0,005
	N	24	27	24	34	36	49	49	64	75	128	73	61	43
	Valor-t	-6,35***	-4,68***	0,29	-5,26***	-3,07***	-4,99***	-6,97***	-3,93***	-7,34***	-8,72***	-5,65***	-4,59***	-9,47***

Nota: \*\*\* 1% , \*\* 5% e \*10% de nível de significância.  $H_0$ : Média = 0. As classes das opções são divididas da seguinte maneira: ATM se a razão preço a vista/preço de exercício estiver entre 0,98 e 1,02 exclusive; ITM se a razão preço a vista/preço de exercício  $\leq 0,98$  e OTM se a razão preço a vista/preço de exercício  $\geq 1,02$ .

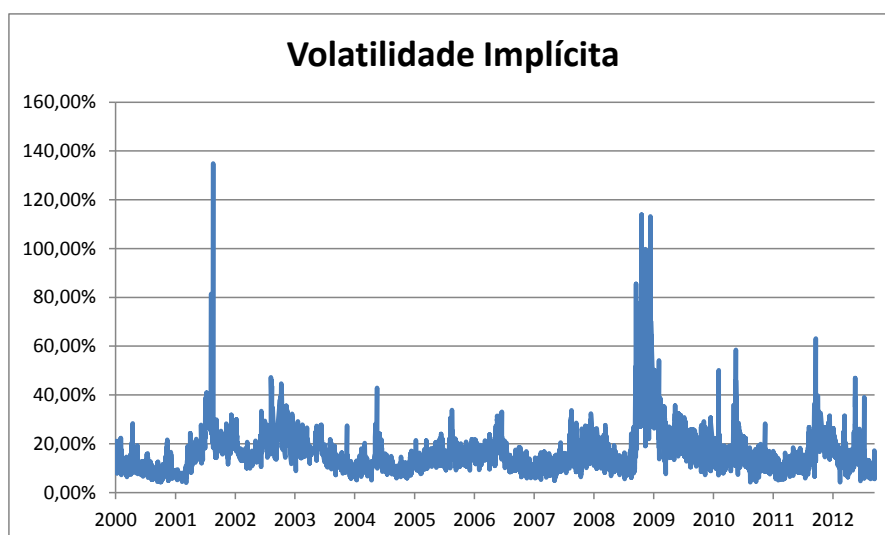


Apêndice 3: Teste de Média não-zero para o prêmio de risco por volatilidade. Metodologia similar a Bakshi & Kapadia (2003)

	Todos	ATM	ITM	OTM
Média	-0,007	-0,007	-0,007	-0,008
DP	0,055	0,063	0,105	0,023
N	1.239	380	172	687
Valor-t	-4,71***	-2,12**	-0,83	-8,88***

Nota: \*\*\* 1% , \*\* 5% e \*10% de nível de significância.  $H_0$ : Média = 0. As classes das opções são divididas da seguinte maneira: ATM se a razão preço a vista/preço de exercício estiver entre 0,98 e 1,02 exclusive; ITM se a razão preço a vista/preço de exercício  $\leq 0,98$  e OTM se a razão preço a vista/preço de exercício  $\geq 1,02$ .

Apêndice 4: Volatilidade Implícita Opções de Compra dólar: Jan./2000 – Set./ 2012



Teste de Raiz Unitária para Volatilidade Implícita

Null Hypothesis: VOL\_IMPL\_MEDIO has a unit root

Exogenous: Constant

Lag Length: 17 (Automatic - based on SIC, maxlag=36)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.959698	0.0016
Test critical values:		
1% level	-3.430955	
5% level	-2.861692	
10% level	-2.566893	

\*MacKinnon (1996) one-sided p-values.