APPENDIX 1

Boston sample: quantiles of raw 1-year return

Boston sample: quantiles of raw 1-year risk

Chicago sample: quantiles of raw 1-year return

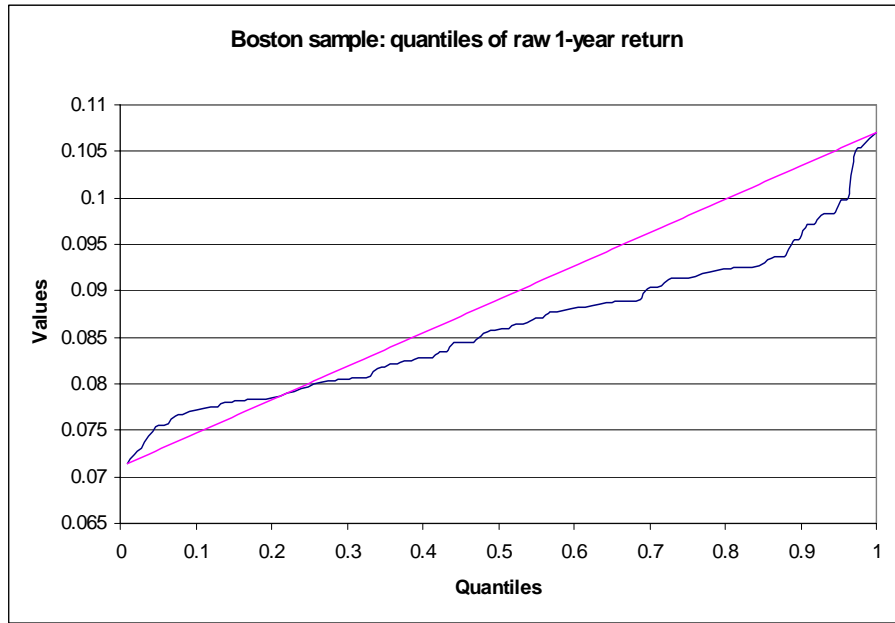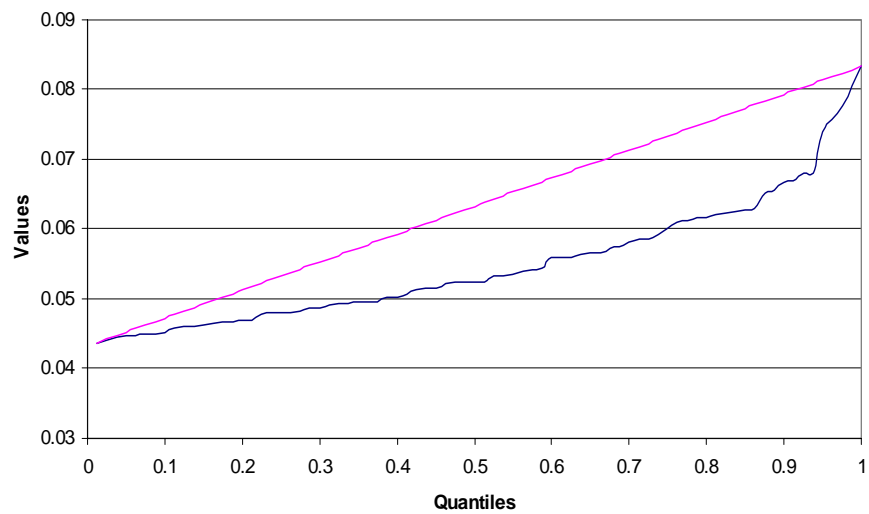**Chicago sample: quantiles of raw 1-year risk**

Phoenix sample: quantiles of raw 1-year return

Phoenix sample: quantiles of raw 1-year risk
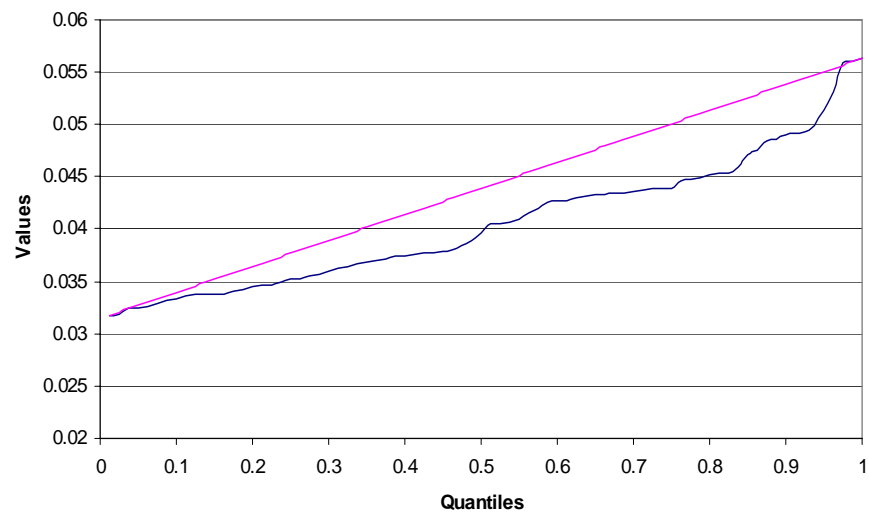
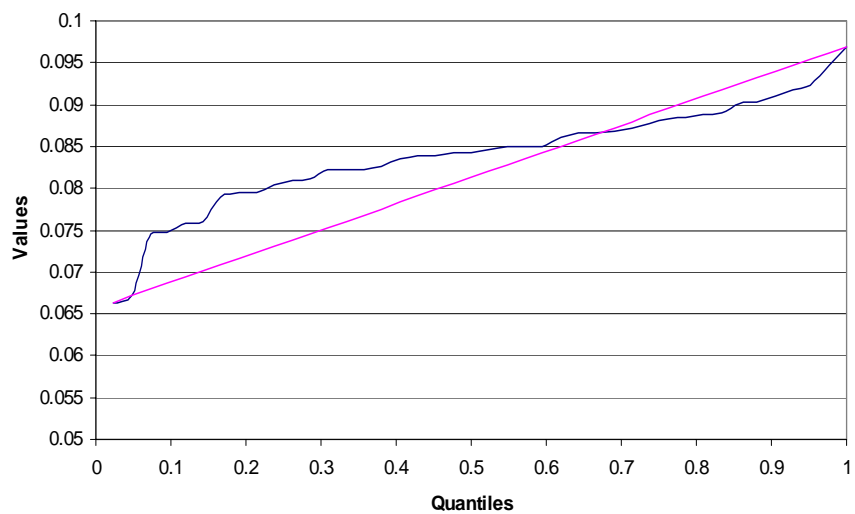**San Diego sample: quantiles of raw 1-year return**

San Diego sample: quantiles of raw 1-year risk

APPENDIX 2

Boston sample: quantiles of autocorrelation beta

Boston sample: quantiles of mean reversion beta

Boston sample: quantiles of structural trend

Boston sample: quantiles of unanticipated volatility
(root mean squared error of univariate model)
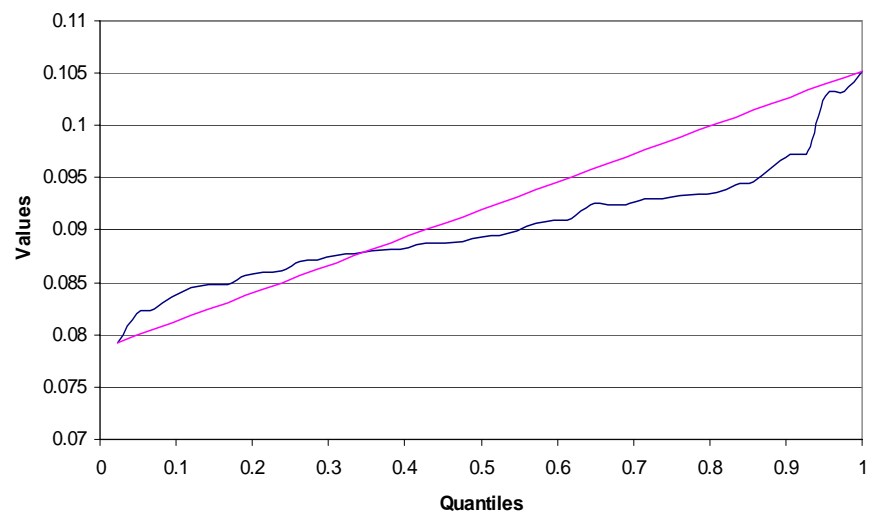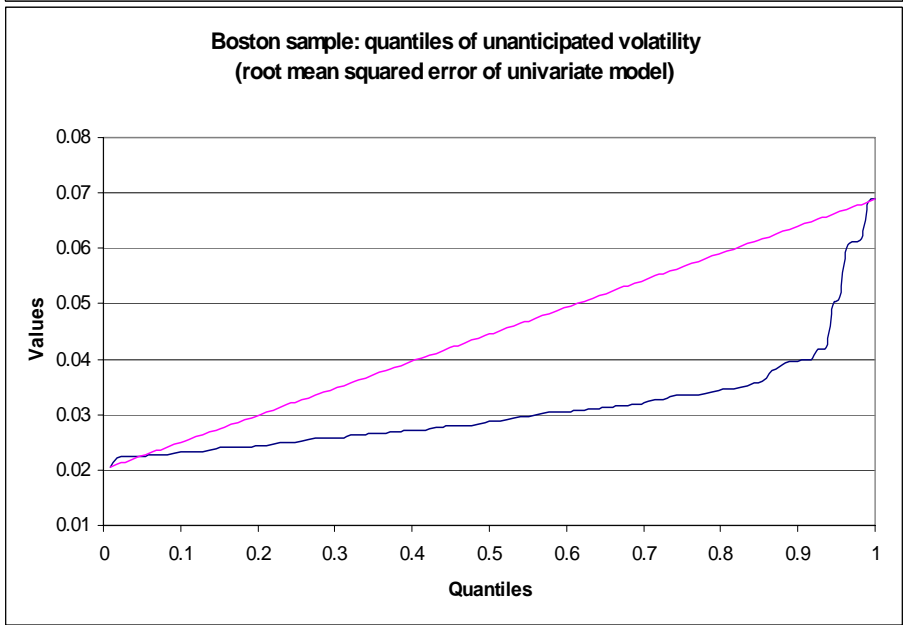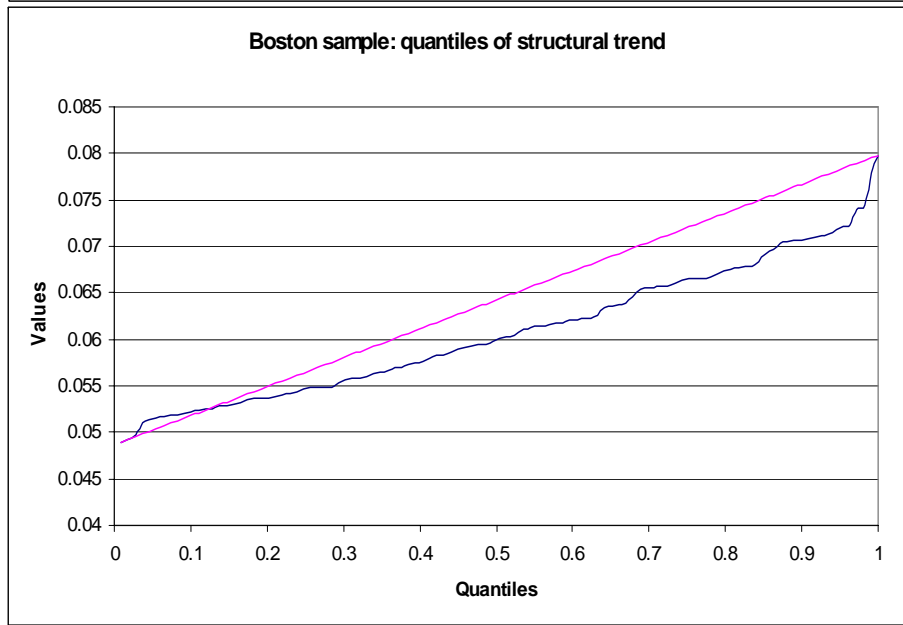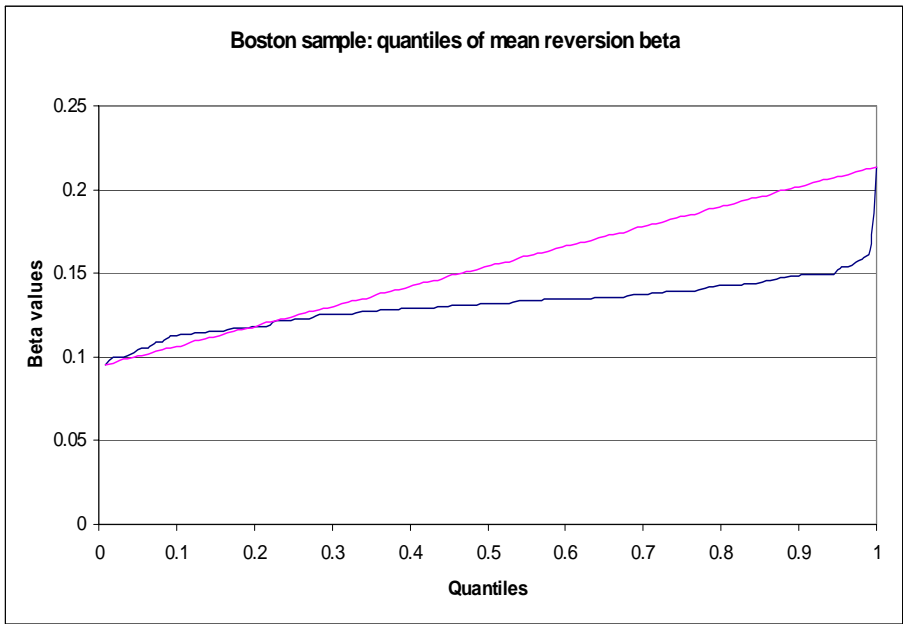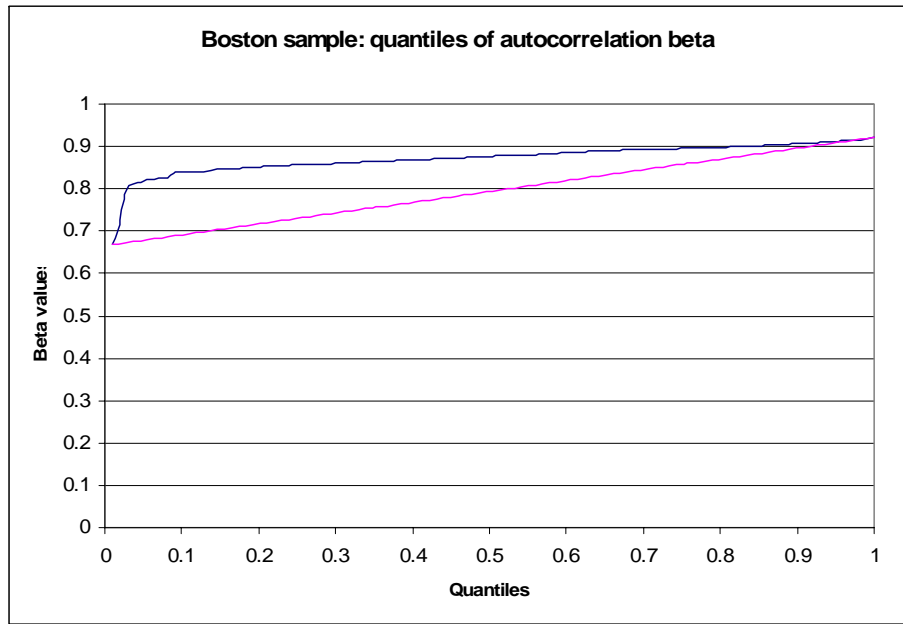
Chicago sample: quantiles of autocorrelation beta
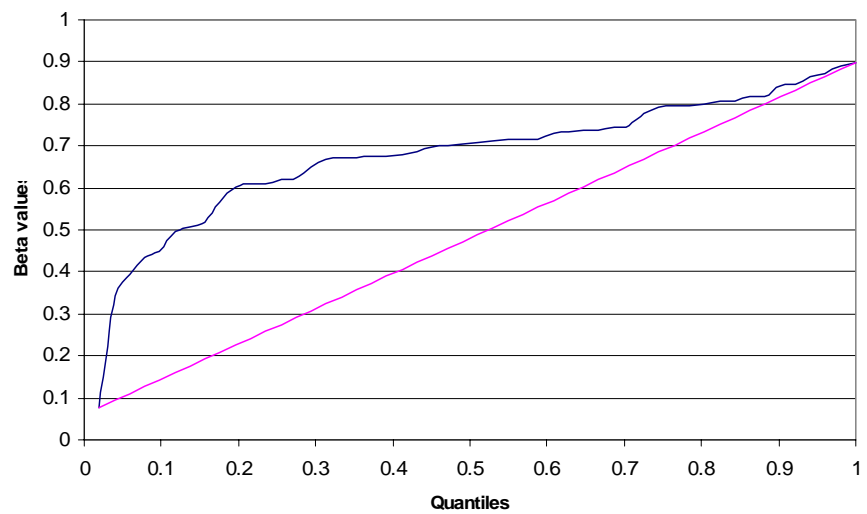
Chicago sample: quantiles of mean reversion beta
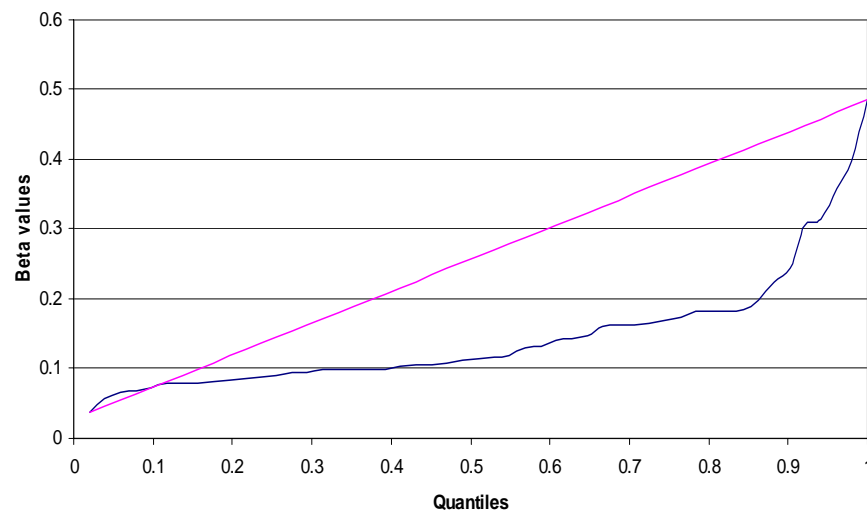
Chicago sample: quantiles of structural trend
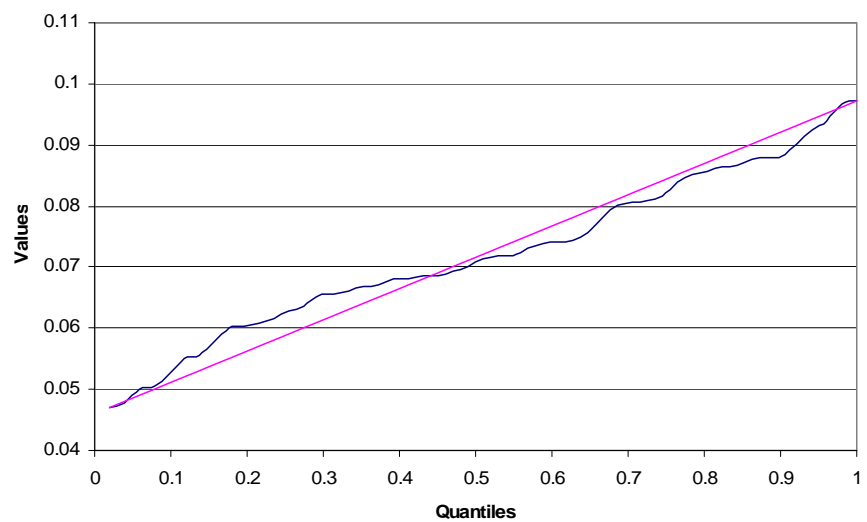
Chicago sample: quantiles of unanticipated volatility (root mean squared error of univariate model)
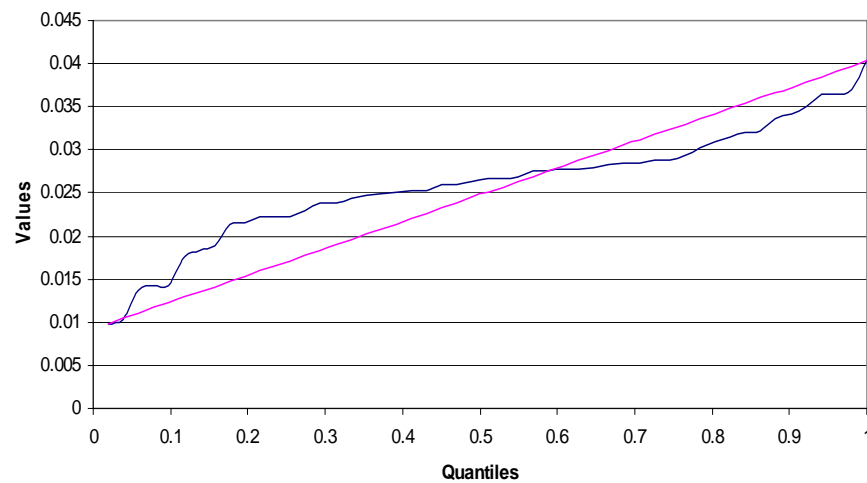
Phoenix sample: quantiles of autocorrelation beta
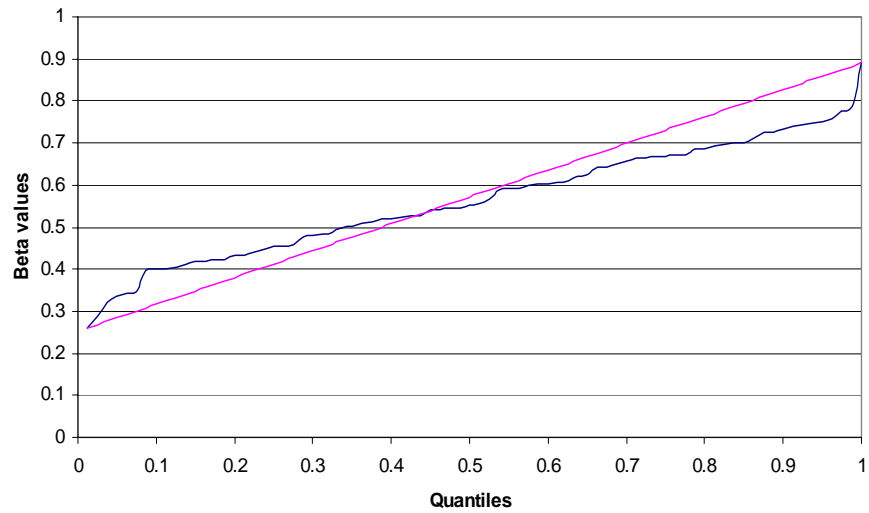
Phoenix sample: quantiles of mean reversion beta
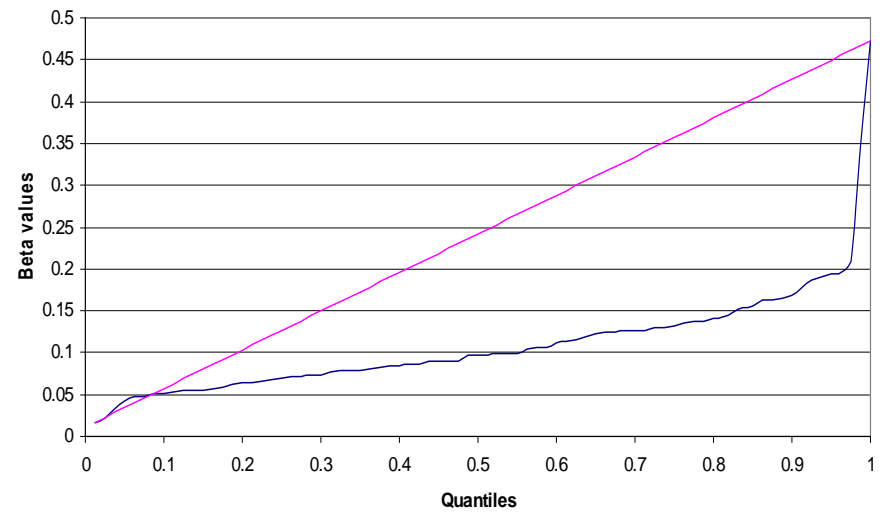
Phoenix sample: quantiles of structural trend
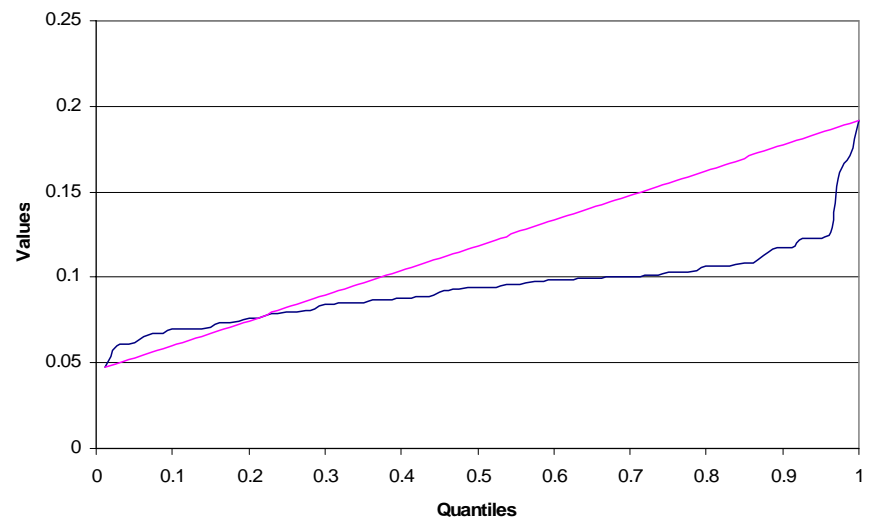
Phoenix sample: quantiles of unanticipated volatility
(root mean squared error of univariate model)

San Diego sample: quantiles of autocorrelation beta
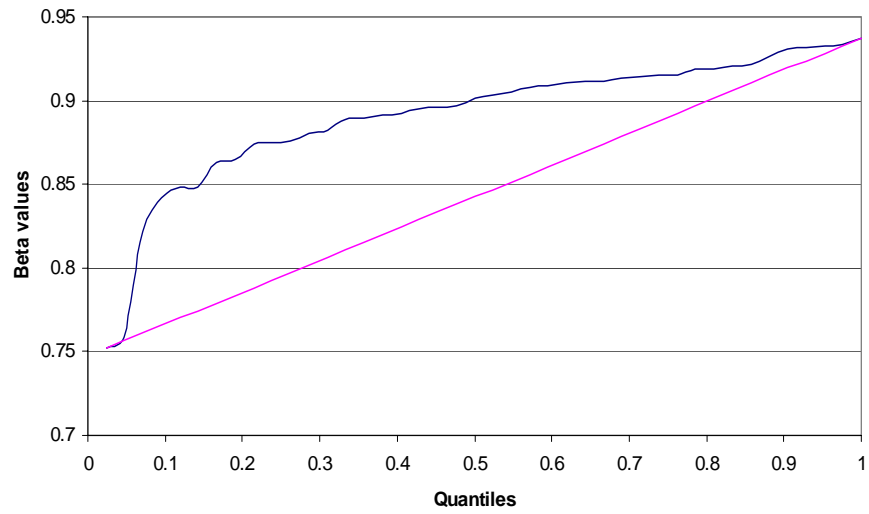
Beta values — Quantiles

San Diego sample: quantiles of mean reversion beta

Beta values — Quantiles

San Diego sample: quantiles of structural trend

Values — Quantiles

**San Diego sample: quantiles of unanticipated volatility
(root mean squared error of univariate model)**

Values — Quantiles

APPENDIX 3

Boston Sample: Autocorrelation vs. Mean Reversion

Chicago sample: Autocorrelation vs. Mean Reversion

Phoenix Sample: Autocorrelation vs. Mean Reversion

San Diego Sample: Autocorrelation vs. Mean Reversion

APPENDIX 4

One-year mean return vs. std. deviation
Boston MSA

$y = 0.4341x + 0.0473$
$R^2 = 0.3323$

One-year mean return vs. std. deviation
Chicago MSA

$y = 1.8287x + 0.0031$
$R^2 = 0.7268$

One-year mean return vs. std. deviation
Phoenix MSA

$y = 0.7452x + 0.0247$
$R^2 = 0.2662$

One-year mean return vs. std. deviation
San Diego MSA

$y = 0.4701x + 0.0415$
$R^2 = 0.1676$
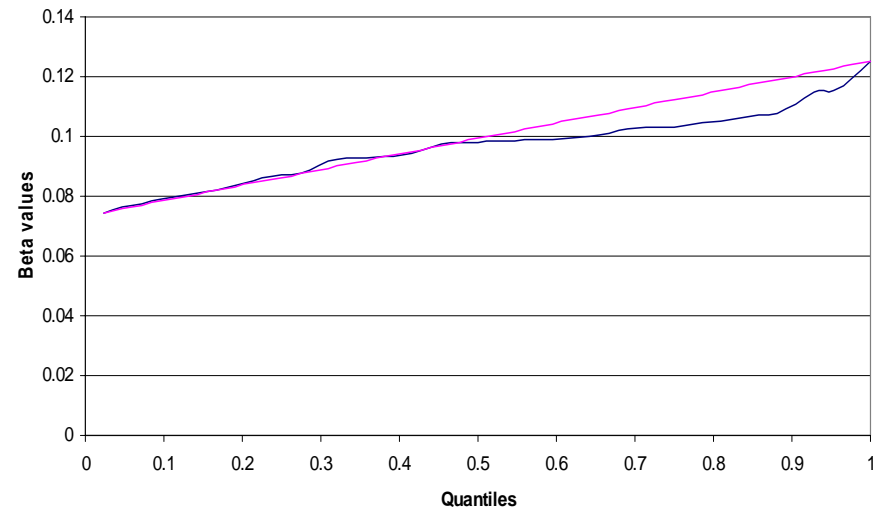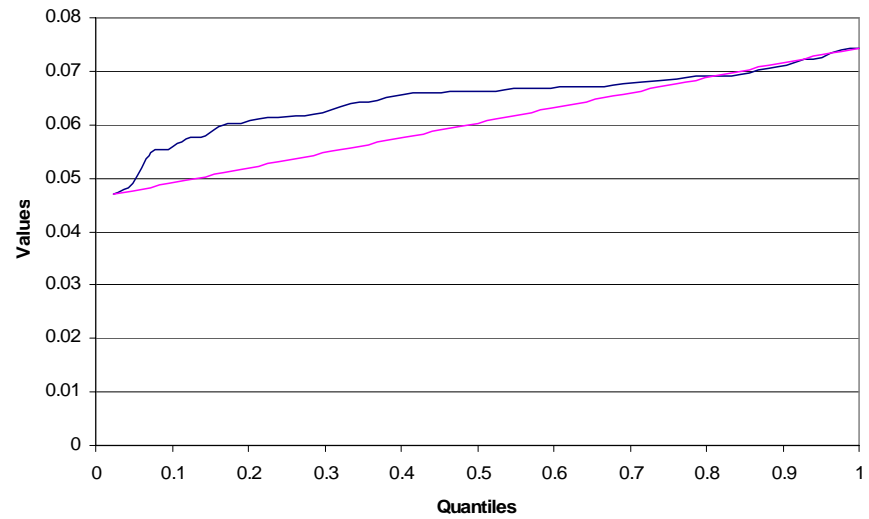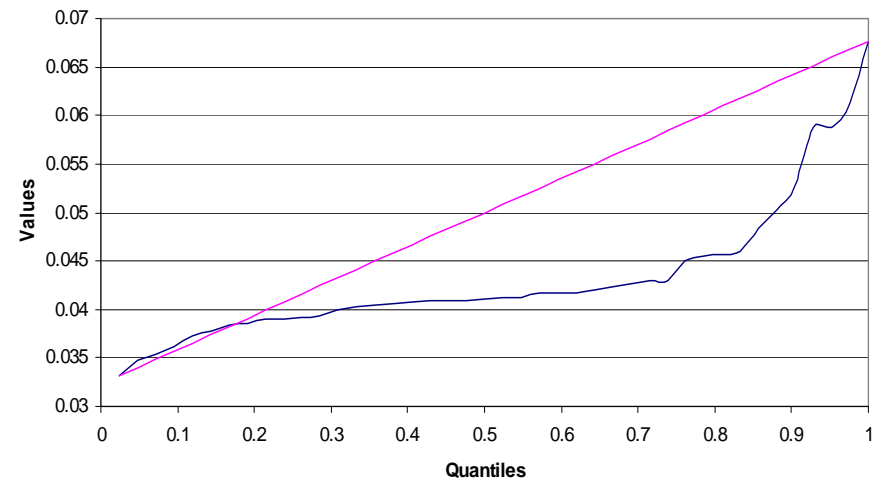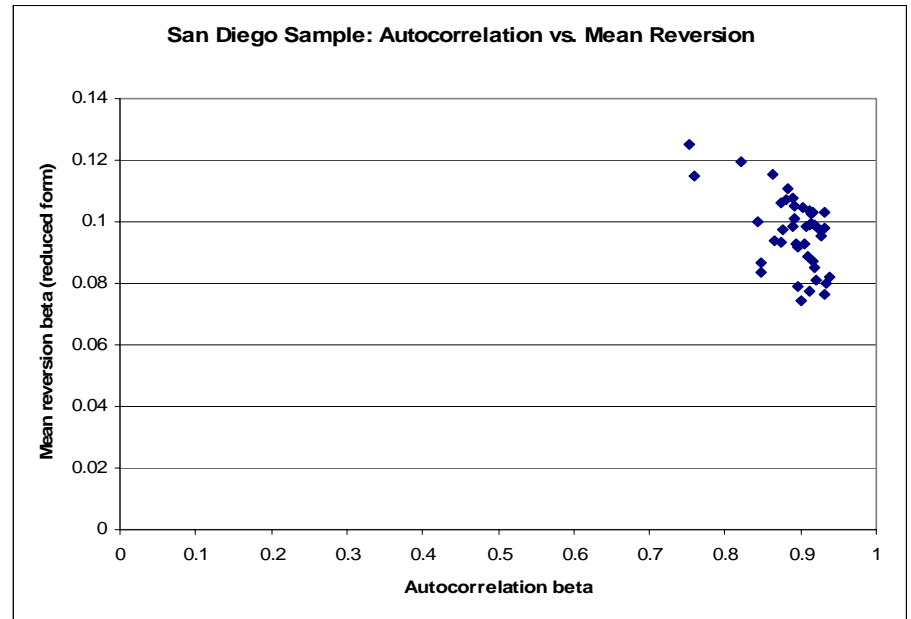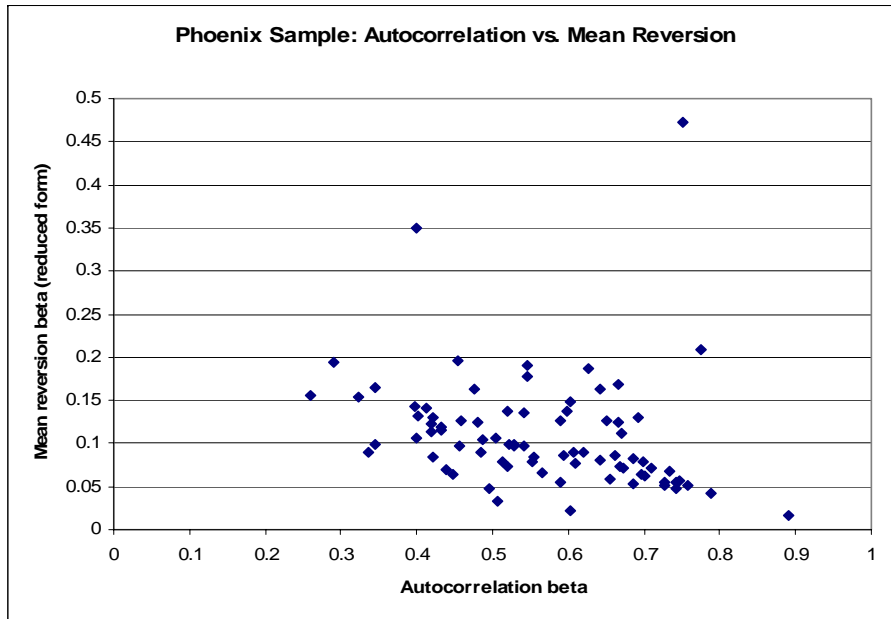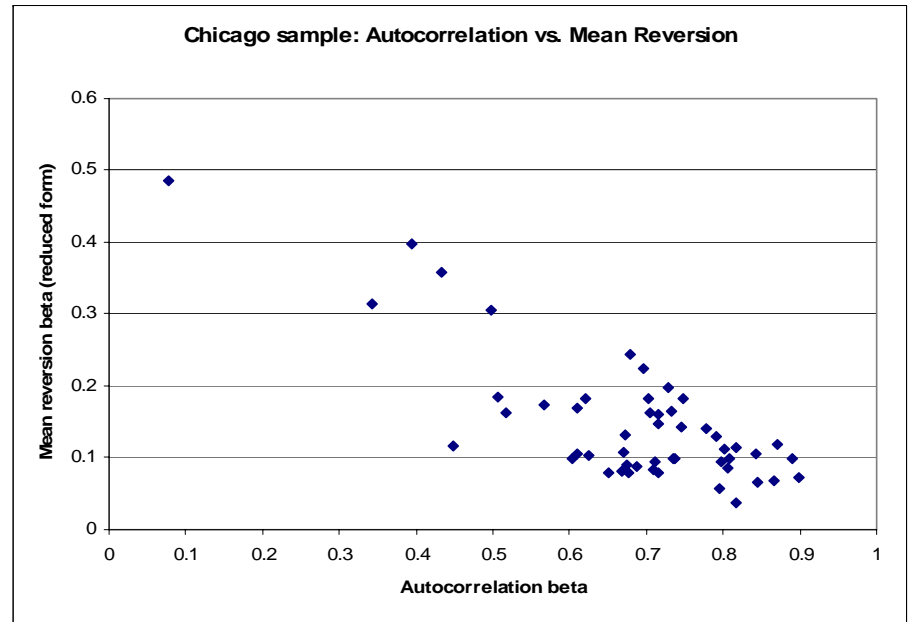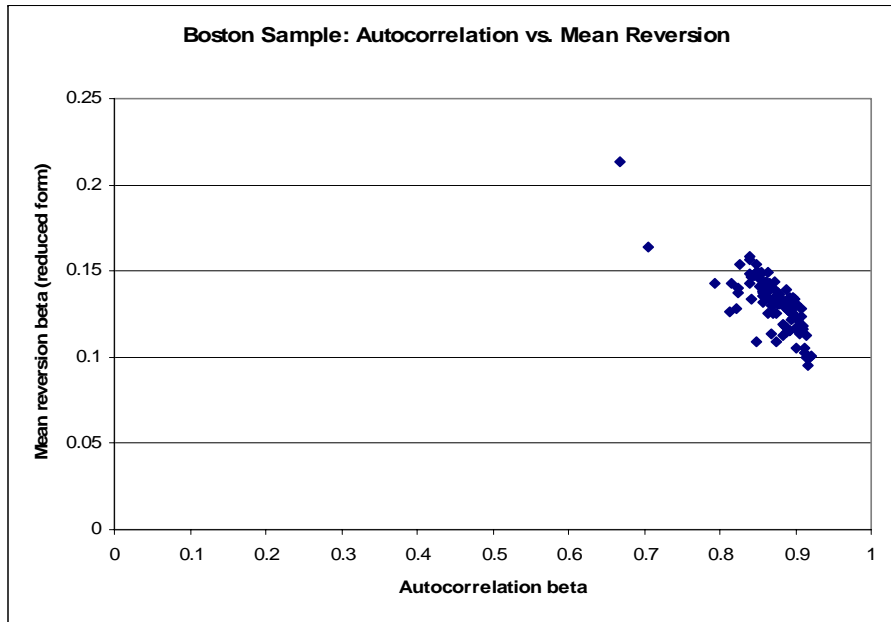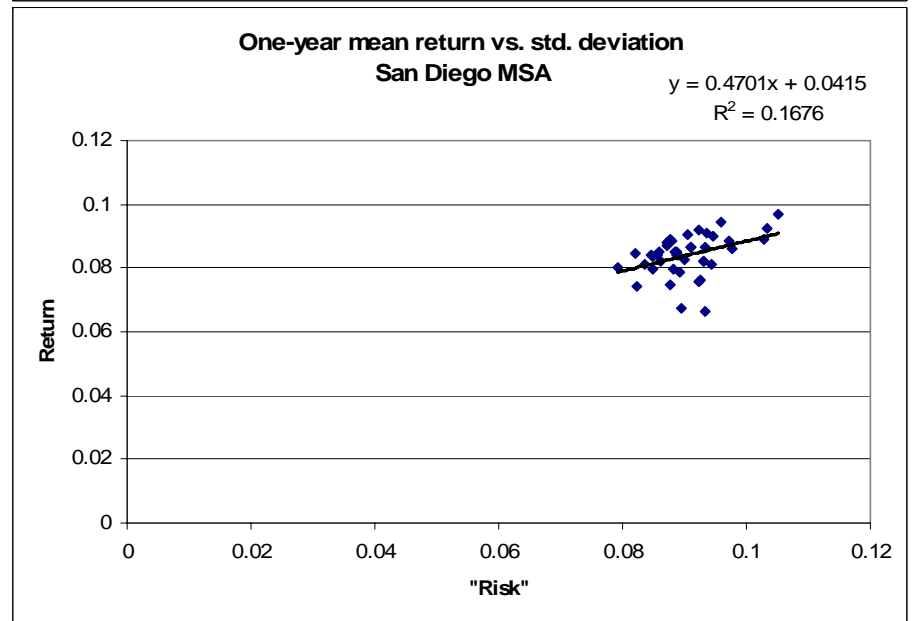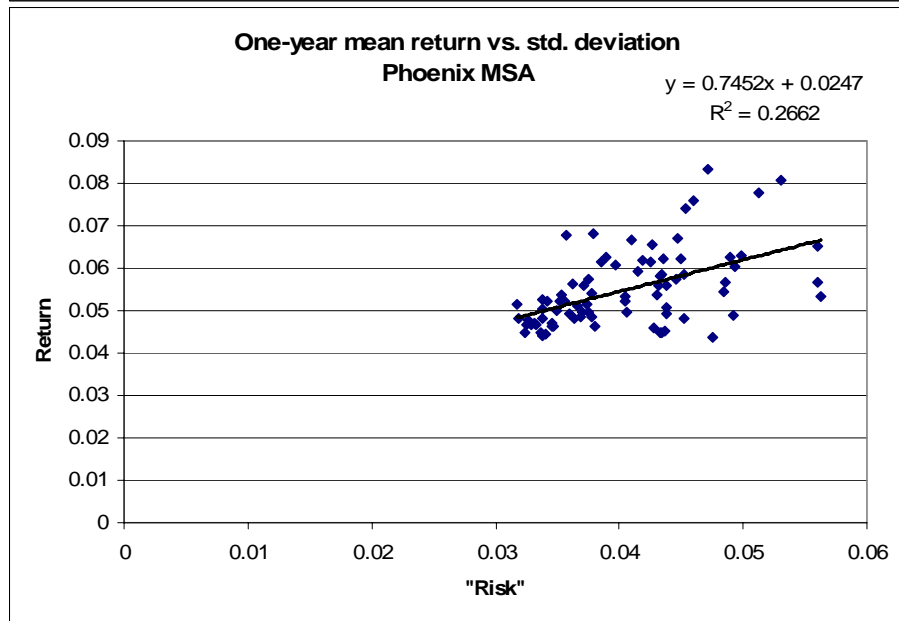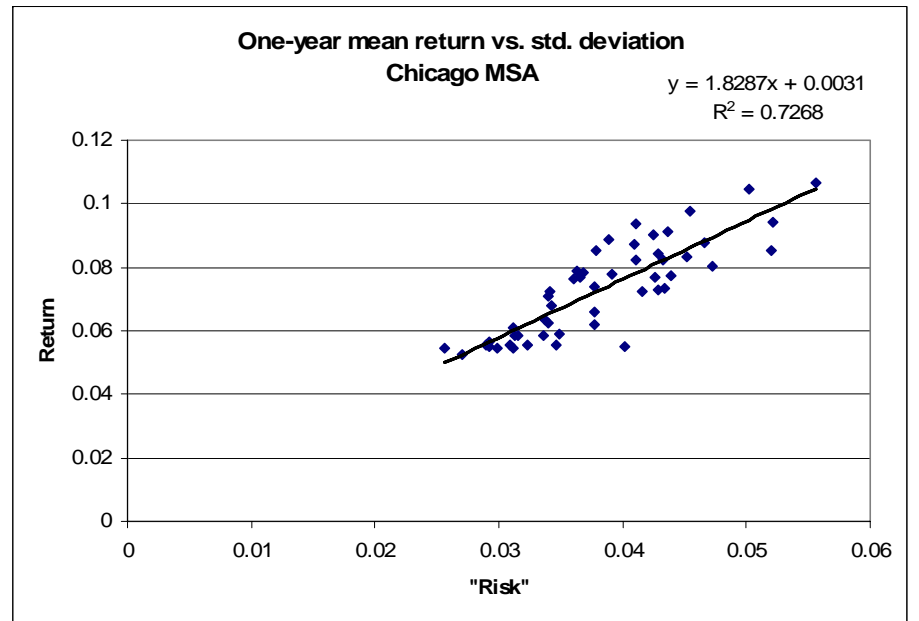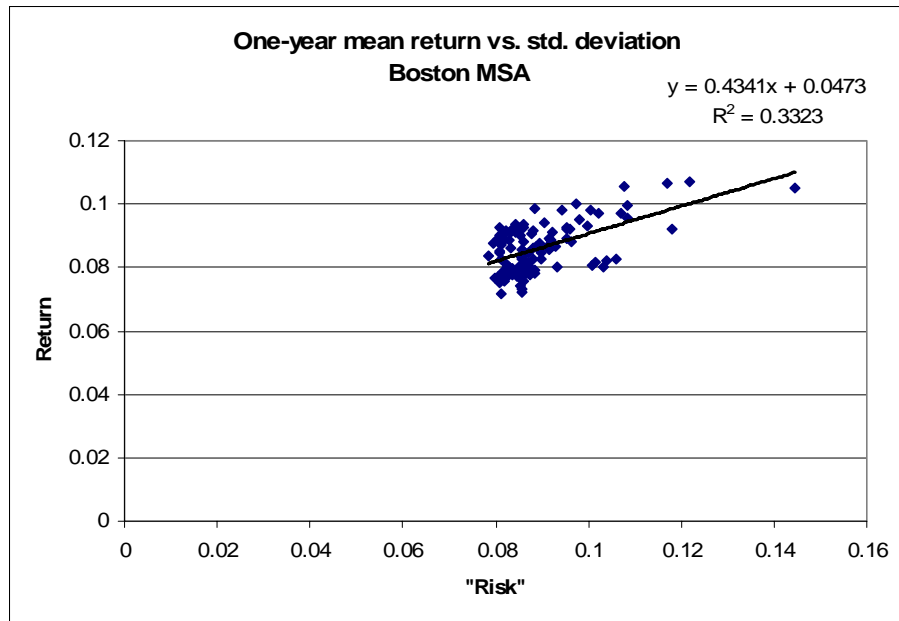
Structural trend slope coefficient vs. root MSE, Boston MSA

$y = 0.4777x + 0.046$
$R^2 = 0.3911$
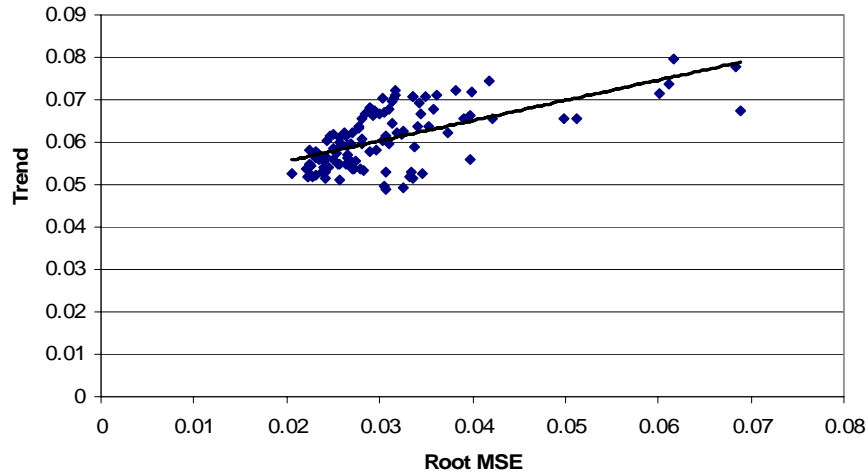
Structural trend slope coefficient vs. root MSE Chicago MSA

$y = 0.2148x + 0.0666$
$R^2 = 0.0115$
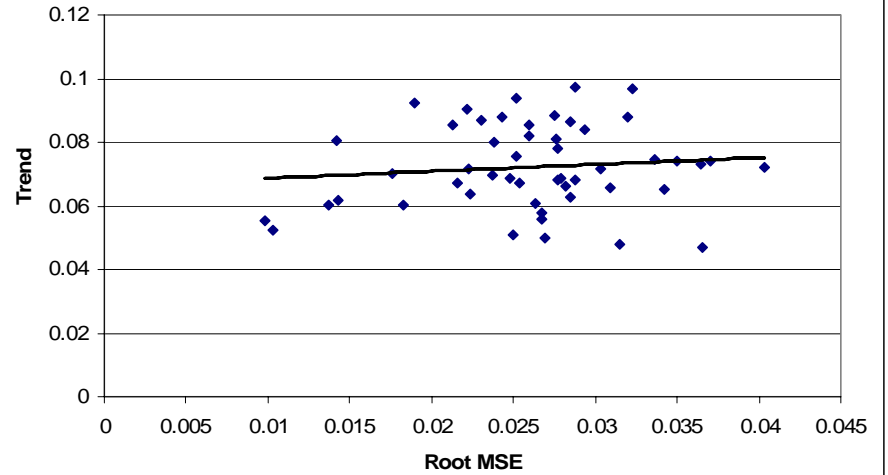
Structural trend slope coefficient vs. root MSE Phoenix MSA

$y = -0.4246x + 0.1033$
$R^2 = 0.008$
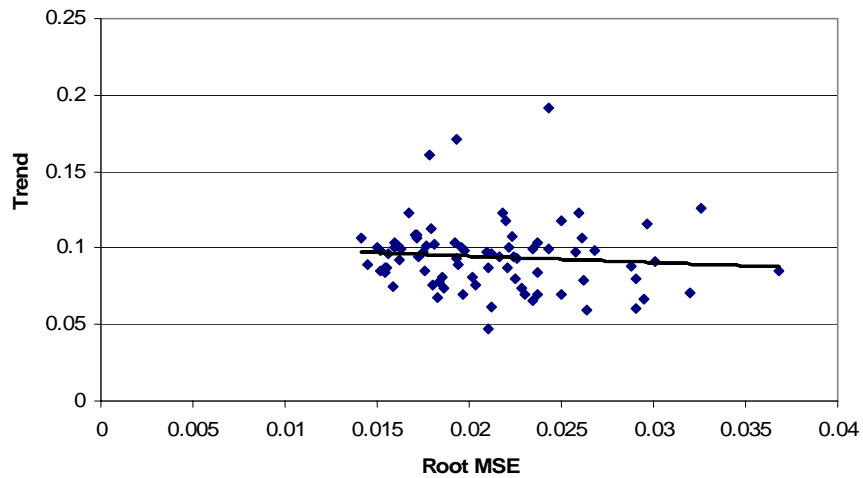
Structural trend slope coefficient vs. root MSE San Diego MSA

$y = 0.2913x + 0.0523$
$R^2 = 0.1218$
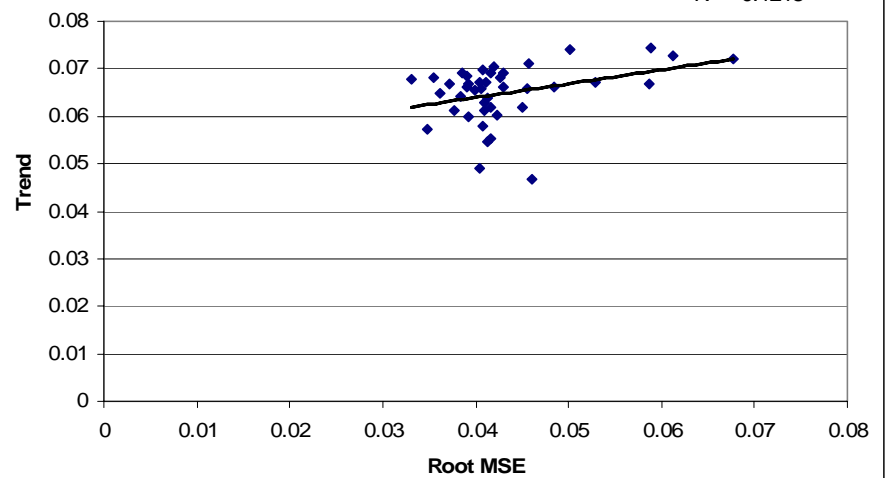
APPENDIX 5

Table 5.1 -- Variable definitions (housing and locational attributes)

log of sale price	natural log of the sale price
built 19XX-19YY	indicator variable = 1 if the home was built during the given interval
# bedroom(s)	indicator variable = 1 if the home contained the designated number of bedrooms
# bathrooms(s)	indicator variable = 1 if the home contained the designated number of bathrooms
# total room(s)	indicator variable = 1 if the home contained the designated number of total rooms
interior square feet	total interior square footage
lot size	total exterior square footage, in acres
pool	indicator variable = 1 if the house has a swimming pool
garage	indicator variable = 1 if the house has a garage
MCAS score	Massachusetts Comprehensive Assessment System score, by zip. Regular
	students in the 10th grade only. Range is between 600 and 840.
violent crime rate	incidence of murder, rape, assault, etc. per 1000 population
property crime rate	incidence of burglary, larceny, etc. per 1000 population
distance to city center	distance in miles from the center of the zip code to the center of the MSA
population density	number of residents per square mile
distance to ocean	distance in miles to the nearest shoreline, via the fastest driving route
ownership rate	number of owner-occupied housing units divided by total units.
percent nonwhite	fraction of the zip population that is nonwhite
log of median income	natural log of the median zip household income

Table 5.2a -- Descriptive Statistics for the Boston Hedonic Sample

N = 19848

	Mean	Std. Dev.	Min	Max
log of sale price	12.3152	0.5591	9.9035	15.0393
built 1960-1980	0.2106	0.4077	0	1
built 1940-1960	0.2558	0.4363	0	1
built 1900-1940	0.2509	0.4335	0	1
built pre-1900	0.0687	0.2530	0	1
1 bedroom	0.0075	0.0863	0	1
2 bedrooms	0.1253	0.3310	0	1
3 bedrooms	0.4939	0.5000	0	1
4 bedrooms	0.3075	0.4615	0	1
1 bathroom	0.2450	0.4301	0	1
1.5 bathrooms	0.2382	0.4260	0	1
2 bathrooms	0.1630	0.3694	0	1
2.5 bathrooms	0.2475	0.4316	0	1
interior square ft.	1917.35	888.34	375.00	14241.00
lot size	0.5185	0.6837	0.0211	9.9565
MCAS score	701.78	24.1870	646.00	744.00
violent crime rate	0.0025	0.0033	0	0.0129
property crime rate	0.0190	0.0116	0	0.0480
dist. to city center/100	0.2083	0.0989	0.0284	0.4597
population density/10000	3.1050	2.9842	0.2631	23.6767
ownership rate	0.7103	0.1501	0.2706	0.9563
non white status	0.1142	0.1173	0.0077	0.9431
log of median income	11.1274	0.3018	10.2010	11.9440
nominal return 1982-2004	0.0849	0.0068	0.0715	0.1070
std. dev. 1982-2004	0.0884	0.0083	0.0784	0.1447
structural trend	0.0596	0.0062	0.0490	0.0798
root mean sq. error	0.0293	0.0068	0.0206	0.0688
nominal return 1998-2004	0.1150	0.0136	0.0914	0.1713
forecasted return 1998-2004	0.0318	0.0084	0.0025	0.0532
std. dev. 1982-1998	0.0894	0.0084	0.0793	0.1463

Table 5.2b: Comparison of coefficients, with and without risk and return. Dependent variable: ln(sale price)

Boston	(1) Housing attributes only	(2) Housing attributes and raw risk/return	(3) Housing attributes with estimated risk/return	(4) Housing attributes and locational char.	(5) Full model with raw risk/return	(6) Full model with estimated risk/return
Built 1960-1980	0.0945 *** (0.0080)	0.0206 *** (0.0074)	0.0288 *** (0.0076)	-0.04683 *** (0.0071)	-0.0419 *** (0.0071)	-0.0442 *** (0.0071)
Built 1940-1960	0.1287 *** (0.0092)	-0.0248 *** (0.0086)	-0.0145 * (0.0088)	-0.11033 *** (0.0084)	-0.1134 *** (0.0083)	-0.1162 *** (0.0083)
Built 1900-1940	0.0731 *** (0.0101)	-0.0460 *** (0.0092)	-0.0703 *** (0.0096)	-0.14939 *** (0.0090)	-0.1455 *** (0.0089)	0.1501 *** (0.0089)
Built pre-1900	0.0198 (0.0143)	-0.0741 *** (0.0131)	-0.0905 *** (0.0135)	-0.17962 *** (0.0125)	-0.1743 *** (0.0123)	-0.1775 *** (0.0124)
1 bedroom	-0.1176 *** (0.0343)	-0.1341 *** (0.0327)	-0.1249 *** (0.0333)	-0.16702 *** (0.0325)	-0.1531 *** (0.0325)	-0.1586 *** (0.0322)
2 bedrooms	-0.0527 *** (0.0179)	-0.0715 *** (0.0157)	-0.0592 *** (0.0160)	-0.08557 *** (0.0148)	-0.0788 *** (0.0146)	-0.0789 *** (0.0146)
3 bedrooms	-0.0120 (0.0158)	-0.0263 ** (0.0138)	-0.0078 (0.0140)	-0.0284 ** (0.0129)	-0.0244 ** (0.0128)	-0.0218 * (0.0127)
4 bedrooms	-0.0049 (0.0153)	-0.0057 (0.0134)	0.0151 (0.0136)	-0.01333 (0.0126)	-0.0115 (0.0124)	-0.0071 (0.0124)
1 bathroom	-0.5418 *** (0.0151)	-0.3451 *** (0.0133)	-0.3891 *** (0.0136)	-0.26762 *** (0.0126)	-0.2497 *** (0.0124)	-0.2528 *** (0.0124)
1.5 bathrooms	-0.3567 *** (0.0141)	-0.2271 *** (0.0122)	-0.2559 *** (0.0126)	-0.181383 *** (0.0115)	-0.1674 *** (0.0113)	-0.169 *** (0.0113)
2 bathrooms	-0.3838 *** (0.0145)	-0.2522 *** (0.0127)	-0.2858 *** (0.0131)	-0.2086 *** (0.0119)	-0.1949 *** (0.0117)	-0.1991 *** (0.0117)
2.5 bathrooms	-0.1468 *** (0.0122)	-0.0926 *** (0.0105)	-0.0936 *** (0.0109)	-0.08157 *** (0.0099)	-0.0738 *** (0.0098)	-0.0728 *** (0.0098)
interior square feet	0.0003 *** (0.0000)	0.0003 *** (0.000)	0.0003 *** (0.0000)	0.0003 *** (0.0000)	0.0003 *** (0.0000)	0.0002 *** (0.0000)
sq. feet squared	-1.56e-08 *** (2.35e-09)	-1.53e-08 *** (2.39e-09)	-1.39e-08 *** (2.45e-09)	-1.11e-08 *** (2.50e-09)	-1.20e-08 *** (2.54e-09)	-1.13e-08 *** (2.54e-09)
lot size in acres	0.1361 *** (0.0103)	0.1575 *** (0.0100)	0.2243 *** (0.0109)	0.08388 *** (0.0096)	0.1001 *** (0.0095)	0.1 *** (0.0096)
lot size squared	-0.0168 *** (0.0020)	-0.0183 *** (0.0019)	-0.0271 *** (0.0022)	-0.01077 *** (0.0016)	-0.0123 *** (0.0016)	-0.0124 *** (0.0017)
distance to city center/100				-1.6375 *** (0.1233)	-0.8395 *** (0.1536)	-0.6087 *** (0.1417)
distance squared				1.0947 *** (0.2179)	0.5157 ** (0.2437)	0.2023 (0.2298)
Population density/10000				0.00033 (0.0020)	0.0116 *** (0.0020)	0.0019 (0.0020)
homeownership rate				-0.82599 *** (0.0366)	-0.5683 *** (0.0400)	-0.6867 *** (0.0372)
percent nonwhite				-0.40788 *** (0.0301)	-0.1889 *** (0.0336)	-0.3083 *** (0.0363)
log of median income				0.80755 *** (0.0230)	0.6524 *** (0.0245)	0.6935 *** (0.0239)
MCAS score (regular students only)				0.0026 *** (0.0002)	0.0025 *** (0.0002)	0.0027 *** (0.0002)
violent crime rate				1.439 (1.174)	2.617 ** (1.203)	-0.9227 (1.234)
property crime rate				-0.0258 (0.3247)	0.3979 (0.3318)	0.8805 ** (0.3334)
1-year return		25.75 *** (0.4907)			10.49 *** (0.8103)	
1-year risk		-27.49 *** (0.4933)			-11.58 *** (0.6731)	
structural trend			35.35 *** (0.5569)			14.48 *** (0.7390)
root MSE			-15.89 *** (0.5143)			-3.876 *** (0.7297)
R-squared	0.5266	0.6438	0.6177	0.6886	0.6956	0.6947
N	19848	19848	19848	19848	19848	19848

Robust std. errors in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5.2c: Comparison of coefficients, historic risk and actual or predicted return '98-'04. Dependent variable: ln(sale price)

Boston	(1) Housing attributes historic risk actual return '98-'04	(2) Full model with historic risk actual return '98-'04	(3) Housing attributes historic risk predicted return	(4) Full model with historic risk predicted return
distance to city center/100		-1.9860 *** (0.1296)		-1.379 *** (0.1284)
distance squared		1.7690 *** (0.2223)		0.8858 *** (0.2247)
Population density/10000		0.0103 *** (0.0021)		0.0069 *** (0.0021)
homeownership rate		-0.5855 *** (0.0402)		-0.5502 *** (0.0399)
percent nonwhite		-0.1435 *** (0.0332)		-0.1703 *** (0.0330)
log of median income		0.6644 *** (0.0258)		0.6009 *** (0.0250)
MCAS score (regular students only)		0.0024 *** (0.0002)		0.0026 *** (0.0002)
violent crime rate		4.944 *** (1.185)		2.041 * (1.210)
property crime rate		-0.2844 (0.3279)		0.5181 (0.3313)
1-year average return	-1.811 *** (0.4877)	-0.2453 (0.5021)	21.29 *** (0.4611)	7.108 *** (0.5199)
1-year historic risk	-15.91 *** (0.8882)	-9.327 *** (0.9112)	-2.59 *** (0.5251)	-3.154 *** (0.8258)
R-squared	0.5909	0.6929	0.6359	0.6960
N	19848	19848	19848	19848

Robust std. errors in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.
The above regressions all include the housing attributes found in Table 5.2b.
These coefficients have been suppressed for visual clarity.

Table 5.3a -- Descriptive Statistics for Chicago Hedonic Sample

N = 12799

	Mean	Std. Dev.	Min	Max
log of sale price	12.0340	0.5271	9.2103	18.6154
built after 1980	0.0683	0.2522	0	1
built 1970-1980	0.1073	0.3095	0	1
built 1960-1970	0.1762	0.3810	0	1
built 1950-1960	0.2914	0.4544	0	1
1 bathroom	0.4125	0.4923	0	1
1.5 bathrooms	0.2372	0.4254	0	1
2 bathrooms	0.1470	0.3541	0	1
2.5 bathrooms	0.1645	0.3708	0	1
3 bathrooms	0.0191	0.1368	0	1
interior square feet	1489.09	654.29	400.00	11860.00
lot size	0.1671	0.1449	0.0250	6.1578
dist. to city center/100	0.1865	0.0895	0.0505	0.3758
population density/10000	7.9093	5.7033	2.0954	31.8603
ownership rate	0.7026	0.1491	0.2001	0.8846
non white status	0.2545	0.2004	0.0516	0.9917
log of median income	10.9157	0.2494	10.2291	11.5877
nominal return 1987-2004	0.0718	0.0130	0.0527	0.1065
std. dev. 1987-2004	0.0381	0.0062	0.0257	0.0556
structural trend	0.0711	0.0117	0.0470	0.0972
root mean sq. error	0.0260	0.0062	0.0099	0.0403
nominal return 1997-2004	0.0939	0.0162	0.0575	0.1246
forecasted return 1997-2004	0.0423	0.0087	0.0250	0.0646
std. dev. 1987-1998	0.0393	0.0054	0.0275	0.0555

Table 5.3b: Comparison of coefficients, with and without risk and return. Dependent variable: ln(sale price)

Chicago	(1) Housing attributes only	(2) Housing attributes and raw risk/return	(3) Housing attributes with estimated risk/return	(4) Housing attributes and locational char.	(5) Full model with raw risk/return	(6) Full model with estimated risk/return
Built after 1980	-0.0643 ***	0.0047 ***	0.0547 ***	0.1277 ***	0.1418 ***	0.1550 ***
	(0.0133)	(0.0158)	(0.0155)	(0.0136)	(0.0135)	(0.0135)
Built 1970-1980	-0.0686 ***	0.0006 **	0.0349 ***	0.0566 ***	0.0735 ***	0.0750 ***
	(0.0116)	(0.0134)	(0.0131)	(0.0113)	(0.0112)	(0.0112)
Built 1960-1970	-0.0225 **	0.0349 **	0.0588 ***	0.0516 ***	0.0622 ***	0.0617 ***
	(0.0103)	(0.0112)	(0.0111)	(0.0098)	(0.0097)	(0.0096)
Built 1950-1960	0.0279 ***	0.0607 ***	0.0717 ***	0.0482 ***	0.0495 ***	0.0413 ***
	(0.0095)	(0.0094)	(0.0093)	(0.0082)	(0.0082)	(0.0081)
1 bathroom	-0.3926 ***	-0.409 ***	-0.4071 ***	-0.2785 ***	-0.2908 ***	-0.2959 ***
	(0.0424)	(0.0435)	(0.0430)	(0.0387)	(0.0387)	(0.0390)
1.5 bathrooms	-0.2589 ***	-0.2832 ***	-0.2755 ***	-0.2083 ***	-0.2237 ***	-0.2299 ***
	(0.0407)	(0.0431)	(0.0426)	(0.0384)	(0.0384)	(0.0387)
2 bathrooms	-0.2493 ***	-0.2704 ***	-0.27 ***	-0.1995 ***	-0.2121 ***	-0.2204 ***
	(0.0418)	(0.0430)	(0.0426)	(0.0383)	(0.0384)	(0.0386)
2.5 bathrooms	-0.1564 ***	-0.1642 ***	-0.1703 ***	-0.1382 ***	-0.1471 ***	-0.1609 ***
	(0.0402)	(0.0415)	(0.0411)	(0.0370)	(0.0371)	(0.0373)
3 bathrooms	-0.1084 **	-0.1098 ***	-0.1128 **	-0.1198 ***	-0.1224 ***	-0.1282 ***
	(0.0470)	(0.0484)	(0.0480)	(0.0420)	(0.0419)	(0.0421)
interior square feet	0.0005 ***	0.0005 ***	0.0005 ***	0.0004 ***	0.0003 ***	0.0004 ***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
sq. feet squared	-4.71e-08 ***	-4.45e-08 ***	-4.35e-08 ***	-2.98e-08 ***	-2.91e-08 ***	-2.88e-08 ***
	(4.58e-09)	(4.48e-09)	(4.32e-09)	(4.00e-09)	(3.97e-09)	(3.91e-09)
lot size in acres	0.5373 ***	0.7248 ***	0.7983 ***	0.2283 ***	0.2985 ***	0.2885 ***
	(0.0533)	(0.0684)	(0.0684)	(0.0426)	(0.0437)	(0.0430)
lot size squared	-0.0896 ***	-0.1277 ***	-0.1404 ***	-0.0214 *	-0.0363 ***	-0.0321 ***
	(0.0254)	(0.0326)	(0.0349)	(0.0109)	(0.0123)	(0.0117)
distance to city center/100				0.2412	1.073 ***	0.5551 **
				(0.2376)	(0.2838)	(0.2346)
distance squared				-3.563 ***	-4.035 ***	-4.432 ***
				(0.4902)	(0.5059)	(0.5092)
Population density/10000				0.0036 ***	-0.0034 **	-0.0055 ***
				(0.0013)	(0.0013)	(0.0014)
homeownership rate				-1.229 ***	-1.03 ***	-1.073 ***
				(0.0423)	(0.0460)	(0.0457)
percent nonwhite				-0.5231 ***	-0.4039 ***	-0.3816 ***
				(0.0239)	(0.0249)	(0.0246)
log of median income				1.228 ***	1.129 ***	1.149 ***
				(0.0259)	(0.0279)	(0.0263)
1-year return		12.81 ***			11.67 ***	
		(0.5504)			(0.6883)	
1-year risk		-21.16 ***			-10.15 ***	
		(1.027)			(0.9851)	
						6.535 ***
structural trend			9.391 ***			(0.4151)
			(0.3573)			
root MSE			-4.472 ***			-5.251 ***
			(0.5881)			(0.8109)
R-squared	0.4429	0.4675	0.4765	0.6014	0.6106	0.6131
N	12799	12799	12799	12799	12799	12799

Robust std. errors in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5.3c: Comparison of coefficients, historic risk and actual or predicted return '98-'04. Dependent variable: ln(sale price)

Chicago	(1) Housing attributes historic risk actual return '98-'03	(2) Full model with historic risk actual return '98-'03	(3) Housing attributes historic risk predicted return	(4) Full model with historic risk predicted return
distance to city center/100		2.127 *** (0.2778)		0.0632 *** (0.2522)
distance squared		-6.332 ** (0.5226)		-3.365 *** (0.5029)
Population density/10000		-0.0035 *** (0.0014)		0.0037 *** (0.0013)
homeownership rate		-1.03 *** (0.0459)		-1.257 *** (0.0455)
percent nonwhite		-0.394 *** (0.0244)		-0.5128 *** (0.0237)
log of median income		1.0650 *** (0.0296)		1.2590 *** (0.0285)
1-year average return	7.556 *** (0.3288)	7.506 *** (0.3424)	-10.17 *** (0.7321)	0.234 (0.7250)
1-year historic risk	-7.423 *** (1.010)	1.014 *** (0.8888)	13.85 *** (1.162)	-2.295 *** (1.194)
R-squared	0.466	0.6133	0.4545	0.6015
N	12799	12799	12799	12799

Robust std. errors in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.
The above regressions all include the housing attributes found in Table 5.3b.
These coefficients have been suppressed for visual clarity.

Table 5.4a -- Descriptice Statistics for the Phoenix Hedonic Sample

N = 34511

	Mean	Std. Dev.	Min	Max
log of sale price	11.7976	0.5102	9.2103	17.1928
built 1980-1990	0.1799	0.3841	0	1
built 1970-1980	0.1622	0.3687	0	1
built 1960-1970	0.0635	0.2438	0	1
built before 1960	0.0982	0.2976	0	1
1 bathroom	0.0636	0.2441	0	1
1.5 bathrooms	0.0018	0.0420	0	1
2 bathrooms	0.3258	0.4687	0	1
2.5 bathrooms	0.1411	0.3481	0	1
3 bathrooms	0.0937	0.2913	0	1
5 total rooms	0.2209	0.4149	0	1
6 total rooms	0.2681	0.4430	0	1
7 total rooms	0.2054	0.4040	0	1
8 or more total rooms	0.2586	0.4379	0	1
interior square feet	1891.46	716.29	302.00	11347.00
lot size	0.2215	0.2186	0.0253	13.0940
pool	0.3204	0.4666	0	1
garage	0.7939	0.4045	0	1
dist. to city center/100	0.1927	0.0706	0.0073	0.3675
population density/10000	4.1683	2.6056	0.3743	19.2318
ownership rate	0.6754	0.1355	0.2826	0.9555
non white status	0.1714	0.1245	0.0170	0.6033
log of median income	10.8362	0.3068	10.0042	11.4894
nominal return 1988-2004	0.0518	0.0070	0.0437	0.0833
std. dev. 1988-2004	0.0389	0.0056	0.0318	0.0563
structural trend	0.0904	0.0264	0.0473	0.1917
root mean sq. error	0.0210	0.0045	0.0141	0.0368
nominal return 1998-2004	0.0765	0.0112	0.0523	0.1163
forecasted return 1998-2004	0.0568	0.0208	0.0191	0.1544
std. dev. 1988-1998	0.0383	0.0057	0.0311	0.0567

Table 5.4b: Comparison of coefficients, with and without risk and return. Dependent variable: ln(sale price)

Phoenix	(1) Housing attributes only	(2) Housing attributes and raw risk/return	(3) Housing attributes with estimated risk/return	(4) Housing attributes and locational char.	(5) Full model with raw risk/return	(6) Full model with estimated risk/return
Built 1980-1990	-0.0759 *** (0.0041)	-0.084 *** (0.0040)	-0.0791 *** (0.0043)	-0.0903 *** (0.0040)	-0.0875 *** (0.0040)	-0.0829 *** 90.0040)
Built 1970-1980	-0.1587 *** (0.0059)	-0.1832 *** (0.0058)	-0.1625 *** (0.0062)	-0.1519 *** (0.0061)	-0.1547 *** (0.0061)	-0.1423 *** (0.0062)
Built 1960-1970	-0.2037 *** (0.0077)	-0.2602 *** (0.0074)	-0.207 *** (0.0079)	-0.1803 *** (0.0080)	-0.1911 *** (0.0080)	-0.175 *** (0.0080)
Built before 1960	-0.1870 *** (0.0085)	-0.3242 *** (0.0088)	-0.184 *** (0.0085)	-0.1818 *** (0.0103)	-0.2057 *** (0.0103)	-0.1733 *** (0.0103)
1 bathroom	-0.1802 *** (0.0121)	-0.196 *** (0.0119)	-0.1777 *** (0.0121)	-0.1116 *** (0.0104)	-0.1219 *** (0.0103)	-0.1135 *** (0.0104)
1.5 bathrooms	-0.1345 *** (0.0292)	-0.1599 *** (0.0288)	-0.1339 *** (0.0290)	-0.1085 *** (0.0252)	-0.1216 *** (0.0249)	-0.1091 *** (0.0251)
2 bathrooms	-0.1145 *** (0.0056)	-0.1037 *** (0.0054)	-0.1147 *** (0.0057)	-0.0505 *** (0.0050)	-0.0515 *** (0.0049)	-0.055 *** (0.0050)
2.5 bathrooms	-0.0493 *** (0.0047)	-0.041 *** (0.0046)	-0.0504 *** (0.0048)	-0.0109 ** (0.0043)	-0.0118 *** (0.0043)	-0.0151 *** (0.0043)
3 bathrooms	-0.0059 (0.0062)	-0.013 ** (0.0060)	-0.0055 (0.0062)	-0.0007 (0.0055)	-0.0047 (0.0055)	0.0016 (0.0055)
5 or fewer total rooms	-0.0242 *** (0.0092)	-0.025 *** (0.0093)	-0.0246 *** (0.0082)	-0.0102 (0.0084)	-0.0101 (0.0083)	-0.0077 (0.0083)
6 total rooms	-0.0605 *** (0.0122)	-0.0632 *** (0.0122)	-0.0615 *** (0.0121)	-0.0408 *** (0.0109)	-0.0394 *** (0.0109)	-0.0361 *** (0.0109)
7 total rooms	-0.1144 *** (0.0155)	-0.113 *** (0.0154)	-0.1149 *** (0.0155)	-0.0755 *** (0.0139)	-0.0746 *** (0.0137)	-0.0681 *** -0.0138
8 total rooms	-0.1803 *** (0.0165)	-0.1785 *** (0.0163)	-0.1816 *** (0.0165)	-0.1213 *** (0.0148)	-0.121 *** (0.0147)	-0.1098 *** (0.0148)
interior square feet	0.0007 *** (0.0000)	0.0007 *** (0.0000)	0.0007 *** (0.0000)	0.0006 *** (0.0000)	0.0006 *** (0.0000)	0.0006 *** (0.0000)
sq. feet squared	-5.80e-08 *** (9.05e-09)	-5.68e-08 *** (8.94e-09)	-5.81e-08 *** (9.05e-09)	-4.78E-08 *** (7.88e-09)	-4.74e-08 *** ('7.77e-09)	-4.72e-08 *** (7.86e-09)
lot size in acres	0.3024 *** (0.0258)	0.2758 *** (0.0250)	0.3066 *** (0.0261)	0.2403 *** (0.0219)	0.229 *** (0.0217)	0.2375 *** (0.0221)
lot size squared	-0.0244 *** (0.0076)	-0.0218 *** (0.0072)	-0.0248 *** (0.0077)	-0.0197 *** (0.0055)	-0.0183 *** (0.0055)	-0.0194 *** (0.0056)
pool	0.0783 *** (0.0037)	0.0682 *** (0.0035)	0.0794 *** (0.0038)	0.0459 *** (0.0033)	0.0432 *** (0.0033)	0.0479 *** (0.0033)
garage	0.0783 *** (0.0057)	0.0839 *** (0.0055)	0.0776 *** (0.0056)	0.0549 *** (0.0048)	0.0609 *** (0.0047)	0.0527 *** (0.0048)
distance to city center/100				-2.277 *** (0.1861)	-0.5317 ** (0.2246)	-2.128 *** (0.1932)
distance squared				4.628 *** (0.4718)	0.7207 (0.5646)	3.635 *** (0.5005)
Population density/10000				-0.0021 *** (0.0007)	-0.0018 *** (0.0007)	-0.0015 ** (0.0007)
homeownership rate				-0.7292 *** (0.0160)	-0.6878 *** (0.0170)	-0.765 *** (0.0161)
percent nonwhite				-0.7983 *** (0.0174)	-0.6914 *** (0.0200)	-0.8763 *** (0.0187)
log of median income				0.4271 *** (0.0089)	0.3923 *** (0.0092)	0.4447 *** (0.0090)
1-year return		13.26 *** (0.3206)			5.004 *** (0.3904)	
1-year risk		0.591 *** (0.3464)			2.536 *** (0.3210)	
structural trend			0.1229 ** (0.0578)			-0.8097 *** (0.0549)
root MSE			-2.759 *** (0.3873)			3.092 *** (0.4173)
R-squared	0.7043	0.7185	0.7047	0.7572	0.7605	0.7593
N	34511	34511	34511	34511	34511	34511

Robust std. errors in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5.4c: Comparison of coefficients, historic risk and actual or predicted return '98-'04. Dependent variable: ln(sale price)

Phoenix	(1) Housing attributes historic risk actual return '98-'03	(2) Full model with historic risk actual return '98-'03	(3) Housing attributes historic risk predicted return	(4) Full model with historic risk predicted return
distance to city center/100		-1.601 *** (0.2101)		-0.9533 *** (0.1983)
distance squared		3.038 *** (0.5206)		1.392 *** (0.5120)
Population density/10000		-0.0021 *** (0.0007)		-0.0034 *** (0.0007)
homeownership rate		-0.7176 *** (0.0172)		-0.6525 *** (0.0171)
percent nonwhite		-0.806 *** (0.0182)		-0.6936 *** (0.0180)
log of median income		0.4051 *** (0.0094)		0.3971 *** (0.0091)
1-year return	3.677 *** (0.2205)	0.6652 *** (0.2378)	3.424 *** (0.0931)	1.607 *** (0.0995)
1-year historic risk	0.3614 (0.3609)	2.851 *** (0.3274)	4.884 *** (0.3138)	4.269 *** (0.2841)
R-squared	0.7088	0.7583	0.7216	0.761
N	34511	34511	34511	34511

Robust std. errors in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.
The above regressions all include the housing attributes found in Table 5.4b.
These coefficients have been suppressed for visual clarity.

Table 5.5a -- Descriptive Statistics for the San Diego Hedonic Sample

N = 13970

	Mean	Std. Dev.	Min	Max
log of sale price	12.2881	0.4989	9.21034	16.53798
built 1980-1990	0.2155	0.4112	0	1
built 1970-1980	0.2251	0.4177	0	1
built 1960-1970	0.1198	0.3248	0	1
built before 1960	0.1628	0.3692	0	1
1 bedroom	0.0042	0.0649	0	1
2 bedrooms	0.1122	0.3156	0	1
3 bedrooms	0.4506	0.4976	0	1
4 bedrooms	0.3488	0.4766	0	1
1 bathroom	0.0953	0.2936	0	1
1.5 bathrooms	0.0265	0.1606	0	1
2 bathrooms	0.4195	0.4935	0	1
2.5 bathrooms	0.2208	0.4148	0	1
3 bathrooms	0.1699	0.3756	0	1
interior square feet	1906.01	757.56	396.00	6922.00
garage	0.9356	0.2455	0	1
pool	0.1739	0.3791	0	1
dist. To city center/100	0.2529	0.1268	0.0316	0.5352
population density/10000	3.1530	2.7704	0.1135	12.6593
distance to ocean	0.1227	0.0825	0.0080	0.3130
ownership rate	0.6103	0.1356	0.2578	0.8613
nonwhite status	0.2823	0.1569	0.0863	0.7833
log of median income	10.8795	0.2637	10.1501	11.4828
nominal return 1975-2004	0.0828	0.0056	0.0664	0.0969
std. dev. 1975-2004	0.0897	0.0050	0.0793	0.1052
structural trend	0.0638	0.0055	0.0469	0.0744
root mean sq. error	0.0416	0.0055	0.0332	0.0677
nominal return 1975-2004	0.1608	0.0120	0.1425	0.2012
forecasted return 1975-2004	0.1424	0.0120	0.1220	0.1714
std. dev. 1975-1998	0.0904	0.0050	0.0798	0.1061

Table 5.5b: Comparison of coefficients, with and without risk and return. Dependent variable: ln(sale price)

San Diego	(1) Housing attributes only	(2) Housing attributes and raw risk/return	(3) Housing attributes with estimated risk/return	(4) Housing attributes and locational char.	(5) Full model with raw risk/return	(6) Full model with estimated risk/return
Built 1980-1990	-0.0111	-0.0211 ***	-0.0262 ***	-0.0271 ***	-0.0249 ***	-0.0285 ***
	(0.0083)	(0.0080)	(0.0080)	(0.0075)	(0.0075)	(0.0075)
Built 1970-1980	-0.0431 ***	-0.0685 ***	-0.0772 ***	-0.0984 ***	-0.0955 ***	-0.1021 ***
	(0.0094)	(0.0090)	(0.0090)	(0.0083)	(0.0083)	(0.0083)
Built 1960-1970	-0.0254 **	-0.0694 ***	-0.089 ***	-0.0825 ***	-0.0784 ***	-0.0797 ***
	(0.0113)	(0.0109)	(0.0111)	(0.0102)	(0.0103)	(0.0102)
Built before 1960	0.0467 ***	-0.0241 *	-0.0672 ***	-0.0522 ***	-0.0508 ***	-0.0549 ***
	(0.0132)	(0.0124)	(0.0133)	(0.0127)	(0.0127)	(0.0127)
1 bedroom	0.1706 ***	0.3067 ***	0.2862 ***	0.1504 ***	0.1424 ***	0.1384 ***
	(0.0581)	(0.0619)	(0.0627)	(0.0496)	(0.0501)	(0.0498)
2 bedrooms	0.1014 ***	0.1764 ***	0.16 ***	0.0971 ***	0.0881 ***	0.0886 ***
	(0.0182)	(0.0178)	(0.0180)	(0.016)	(0.0159)	(0.0159)
3 bedrooms	0.0621 ***	0.1127 ***	0.1067 ***	0.0774 ***	0.0758 ***	0.0785 ***
	(0.0138)	(0.0134)	(0.0135)	(0.0121)	(0.0120)	(0.0120)
4 bedrooms	0.0393 ***	0.0582 ***	0.0554 ***	0.0501 ***	0.0493 ***	0.0508 ***
	(0.0123)	(0.0118)	(0.0119)	(0.0106)	(0.0106)	(0.0106)
1 bathroom	-0.1896 ***	-0.1415 ***	-0.1484 ***	-0.1074 ***	-0.1116 ***	-0.1086 ***
	(0.0286)	(0.0273)	(0.0273)	(0.0246)	(0.0246)	(0.0245)
1.5 bathrooms	-0.1883 ***	-0.1263 ***	-0.1300 ***	-0.0755 ***	-0.0812 ***	-0.0790 ***
	(0.0313)	(0.0301)	(0.0301)	(0.0269)	(0.0268)	(0.0268)
2 bathrooms	-0.0993 ***	-0.0511 **	-0.0544 **	-0.0296	-0.0275	-0.0271
	(0.0235)	(0.0222)	(0.0223)	(0.0203)	(0.0202)	(0.0202)
2.5 bathrooms	-0.0826 ***	-0.0636 ***	-0.0659 ***	-0.054 ***	-0.0515 ***	-0.0507 ***
	(0.0216)	(0.0202)	(0.0203)	(0.0187)	(0.0186)	(0.0186)
3 bathrooms	-0.0702 ***	-0.0497 ***	-0.0512 ***	-0.0447 **	-0.0443 **	-0.0444 **
	(0.0200)	(0.0187)	(0.0188)	(0.0173)	(0.0173)	(0.0172)
interior square feet	0.0007 ***	0.0007 ***	0.0007 ***	0.0005 ***	0.0005 ***	0.0005 ***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
sq. feet squared	-4.45e-08 ***	-5.60e-08 ***	-5.36e-08 ***	-3.26e-08 ***	-3.17e-08 ***	-3.11e-08 ***
	(4.93e-09)	(4.82e-09)	(4.85e-09)	(4.49e-09)	('4.50e-09)	('4.47e-09)
pool	0.0401 ***	0.0477 ***	0.1355 ***	0.0549 ***	0.056 ***	0.0569 ***
	(0.0086)	(0.0082)	(0.0082)	(0.0076)	(0.0076)	(0.0076)
garage	0.1469 ***	0.1349 ***	0.049 ***	0.1149 ***	0.1114 ***	0.1121 ***
	(0.0145)	(0.0140)	(0.0140)	(0.0124)	(0.0123)	(0.0123)
distance to city center/100				-1.142 ***	-0.9582 ***	-0.5148 ***
				(0.1343)	(0.1393)	(0.1393)
distance squared				1.362 ***	0.4539	0.3359
				(0.2353)	(0.2803)	(0.2803)
Population density/10000				0.0003	-0.0071 ***	-0.0053 ***
				(0.0015)	(0.0017)	(0.0015)
distance to ocean/100				-0.6137 ***	-0.5954 ***	-0.5213 ***
				(0.1521)	(0.1633)	(0.1675)
distance to ocean squared				-0.0052	0.2651	0.1774
				(0.5034)	(0.4995)	(0.5063)
homeownership rate				-0.8904 ***	-0.7324 ***	-0.776 ***
				(0.0343)	(0.0367)	(0.0352)
percent nonwhite				-0.6621 ***	-0.7103 ***	-0.5492 ***
				(0.0198)	(0.0209)	(0.0223)
log of median income				0.6371 ***	0.6111 ***	0.6592 ***
				(0.0203)	(0.0201)	(0.0213)
1-year return		17.67 ***			-2.660 **	
		(1.371)			(1.325)	
1-year risk		-3.770 ***			11.01 ***	
		(1.122)			(1.158)	
structural trend			15.77 ***			1.769
			(0.6021)			(1.388)
root MSE			6.209 ***			8.995 ***
			(0.6729)			(0.7776)
R-squared	0.5370	0.5703	0.5697	0.6546	0.6750	0.6576
N	13970	13970	13970	13970	13970	13970

Robust std. errors in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5.5c: Comparison of coefficients, historic risk and actual or predicted return '98-'04. Dependent variable: ln(sale price)

Phoenix	(1) Housing attributes historic risk actual return '98-'03	(2) Full model with historic risk actual return '98-'03	(3) Housing attributes historic risk predicted return	(4) Full model with historic risk predicted return
distance to city center/100		-1.470 *** (0.1469)		-1.057 *** (0.0017)
distance squared		1.274 *** (0.2585)		0.5452 ** (0.1513)
Population density/10000		-0.0057 *** (0.0017)		-0.0081 *** (0.4989)
distance to ocean/100		-0.6565 *** (0.1505)		-0.6425 *** (0.4989)
distance to ocean squared		0.4049 (0.4977)		0.4318 (0.0393)
homeownership rate		-0.6497 *** (0.0385)		-0.6407 *** (0.0393)
percent nonwhite		-0.6369 *** (0.0201		-0.6023 *** (0.0228)
log of median income		0.4843 *** (0.0259)		0.5138 *** (0.0241)
1-year real return	-8.903 *** (0.3452)	-4.682 *** (0.5573)	-7.712 *** (0.2739)	-3.089 *** (0.4070)
1-year real risk	9.911 *** (0.7160)	11.68 *** (1.117)	-0.7106 (0.5962)	8.359 *** (1.139)
R-squared	0.5612	0.6584	0.6347	0.6582
N	13970	13970	13970	13970

Robust std. errors in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.
The above regressions all include the housing attributes found in Table 5.5b.
These coefficients have been suppressed for visual clarity.