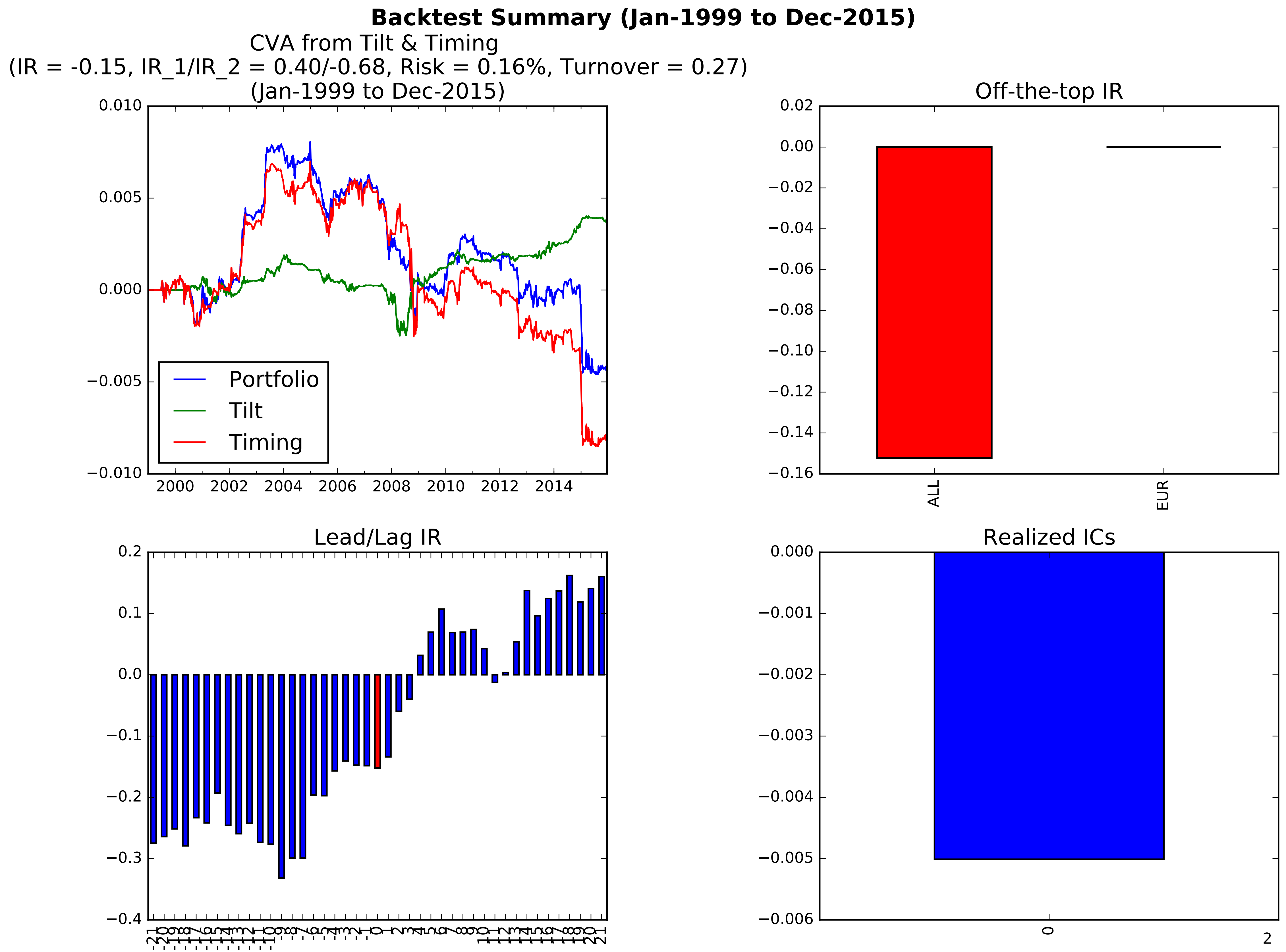
EU signal

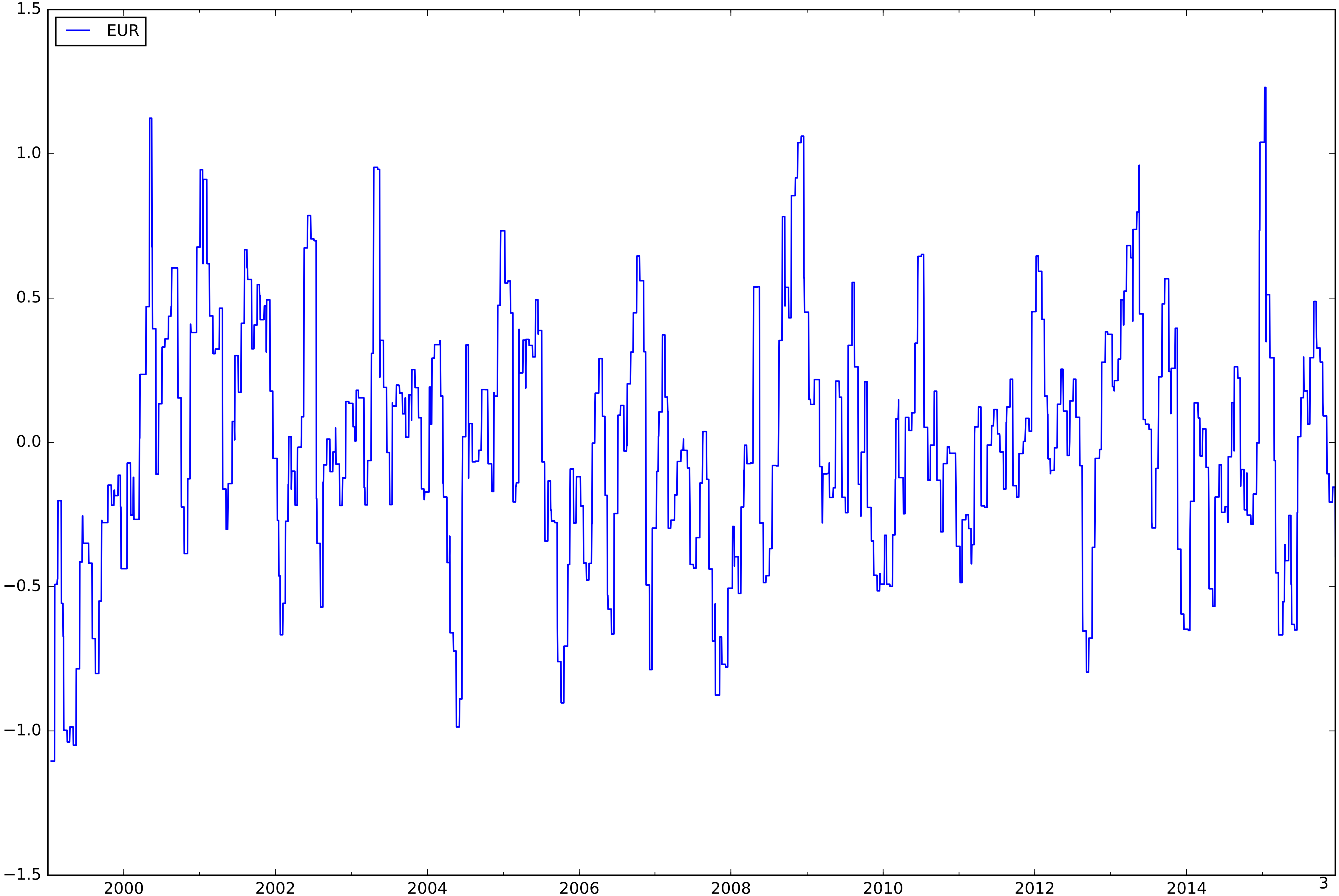
AEG

July 13, 2016

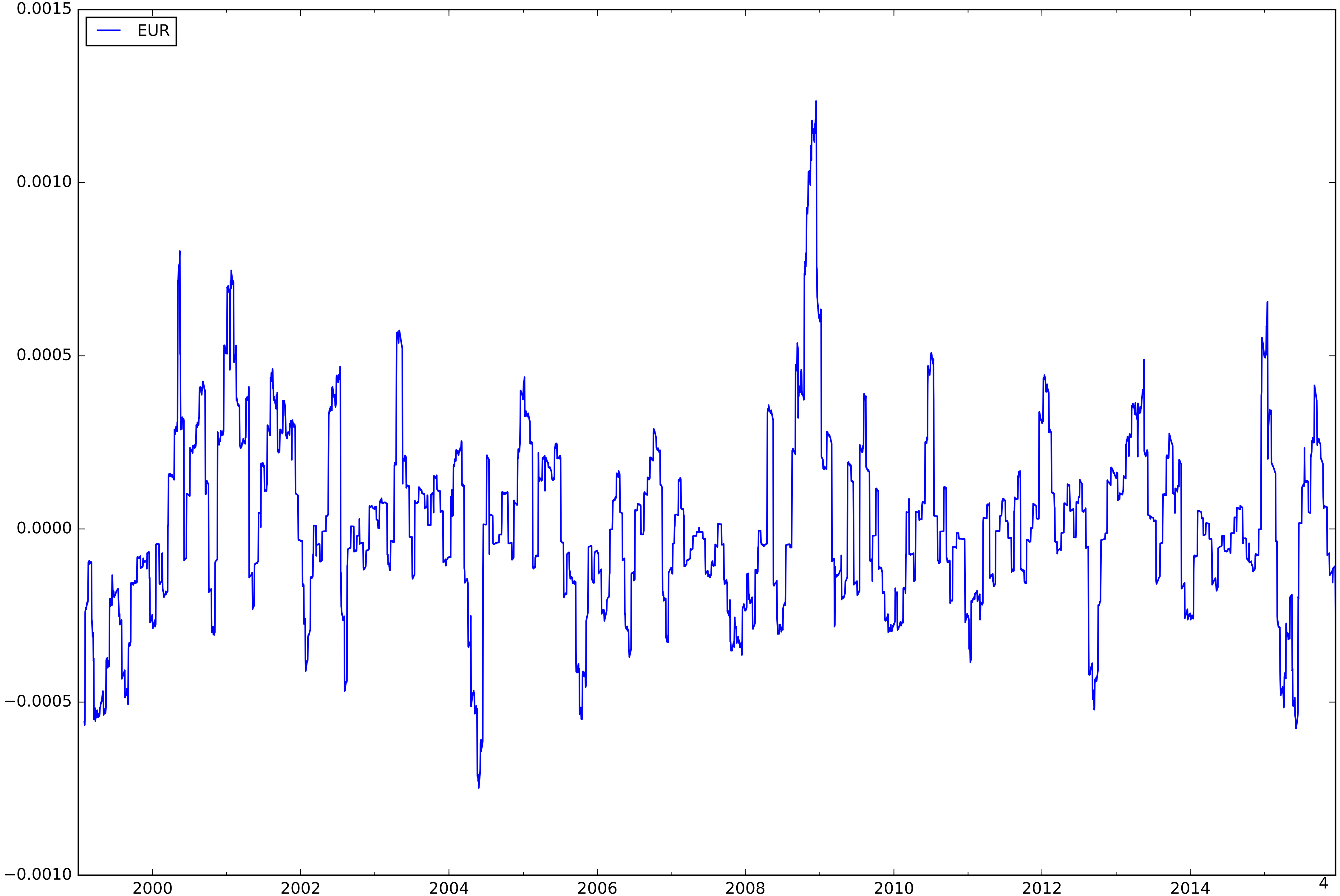
STATE STREET GLOBAL ADVISORS

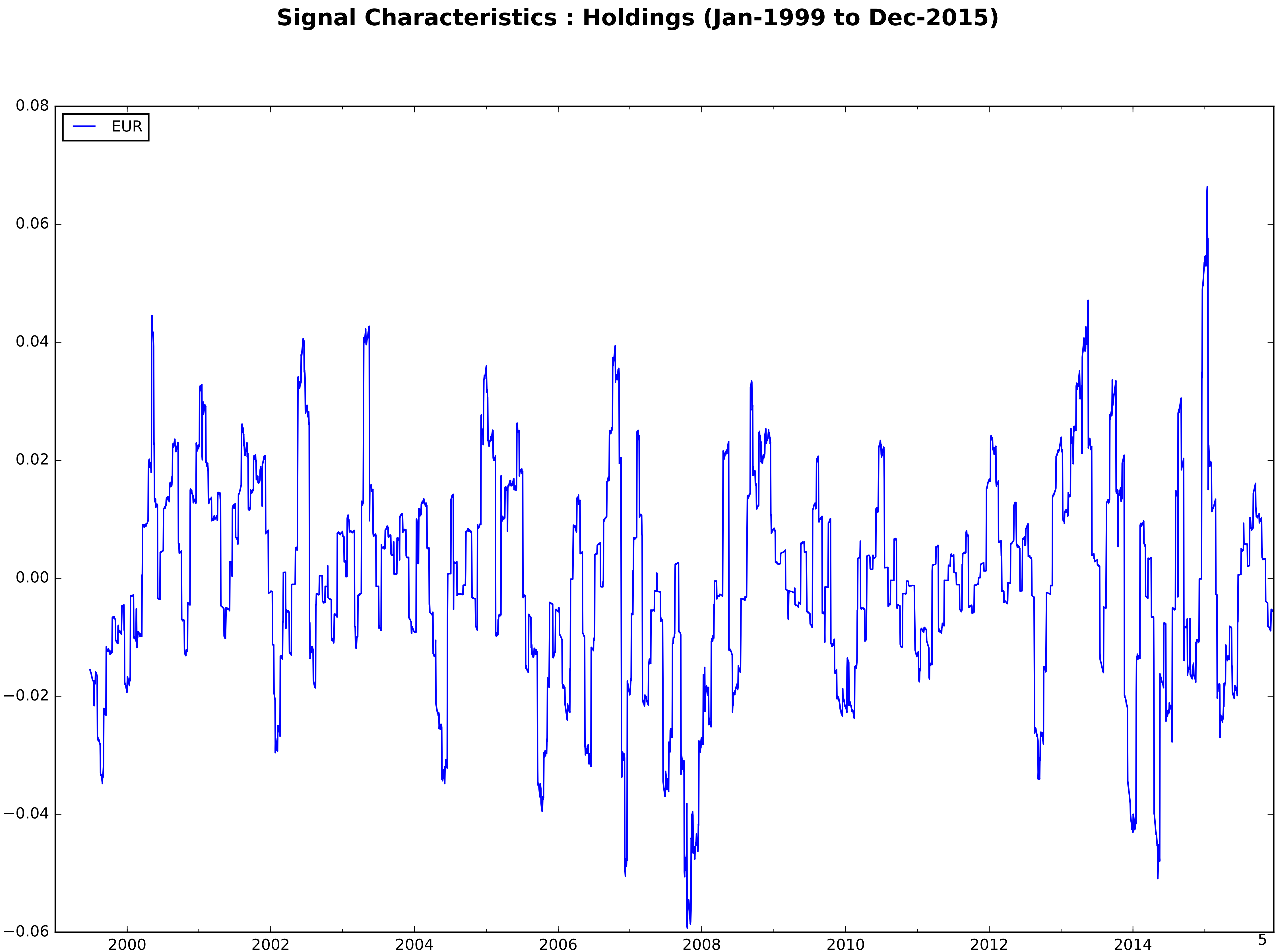

Backtest Summary (Jan-1999 to Dec-2015)
CVA from Tilt & Timing
(IR = -0.15, IR_1/IR_2 = 0.40/-0.68, Risk = 0.16%, Turnover = 0.27)
(Jan-1999 to Dec-2015)
Portfolio
Tilt
Timing
Off-the-top IR
ALL
EUR
Lead/Lag IR
Realized ICs

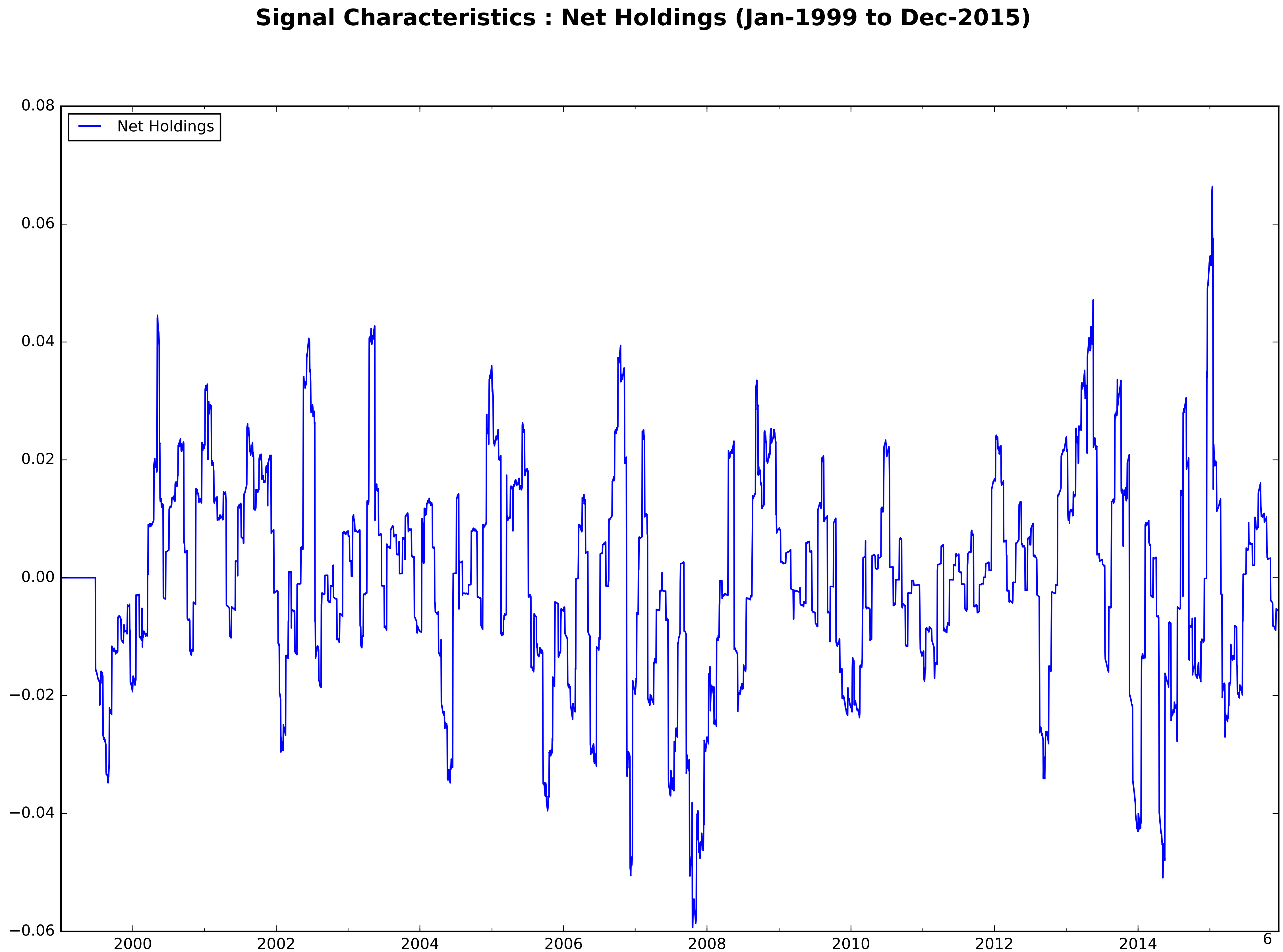
Signal Characteristics : Score (Jan-1999 to Dec-2015)



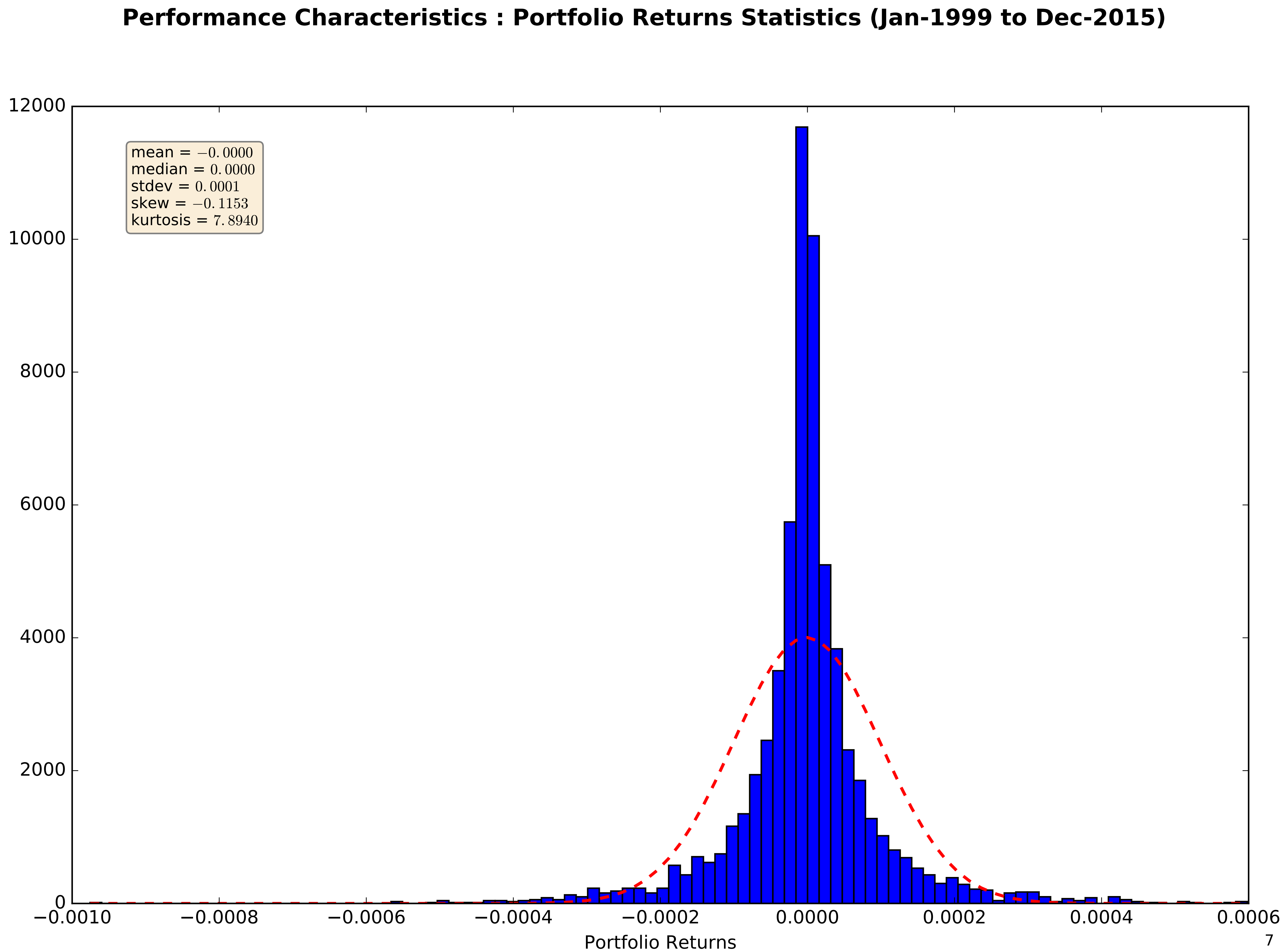
Signal Characteristics : Alpha (Jan-1999 to Dec-2015)



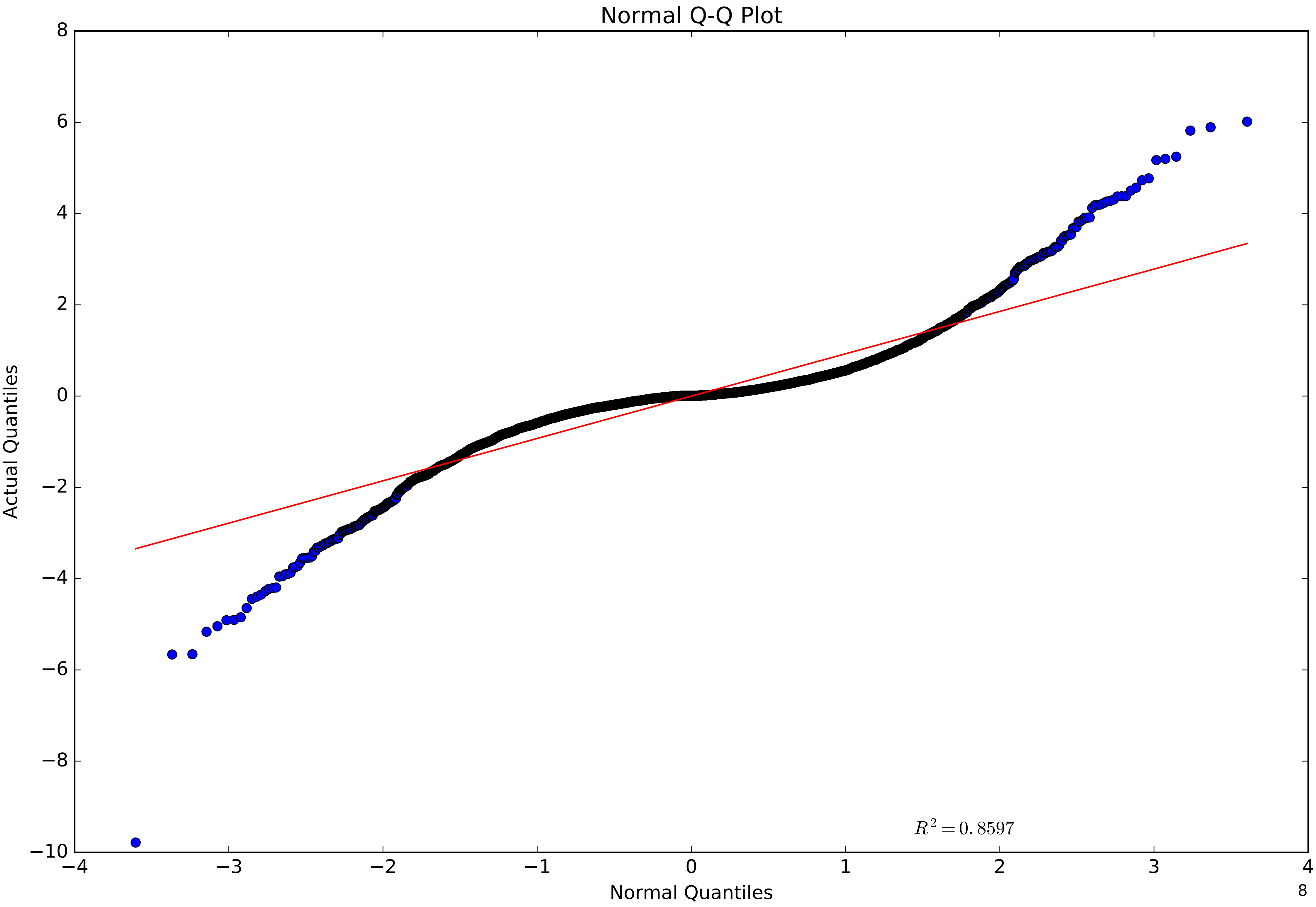

Signal Characteristics : Holdings (Jan-1999 to Dec-2015)
EUR
0.08
0.06
0.04
0.02
0.00
−0.02
−0.04
−0.06
2000
2002
2004
2006
2008
2010
2012
2014

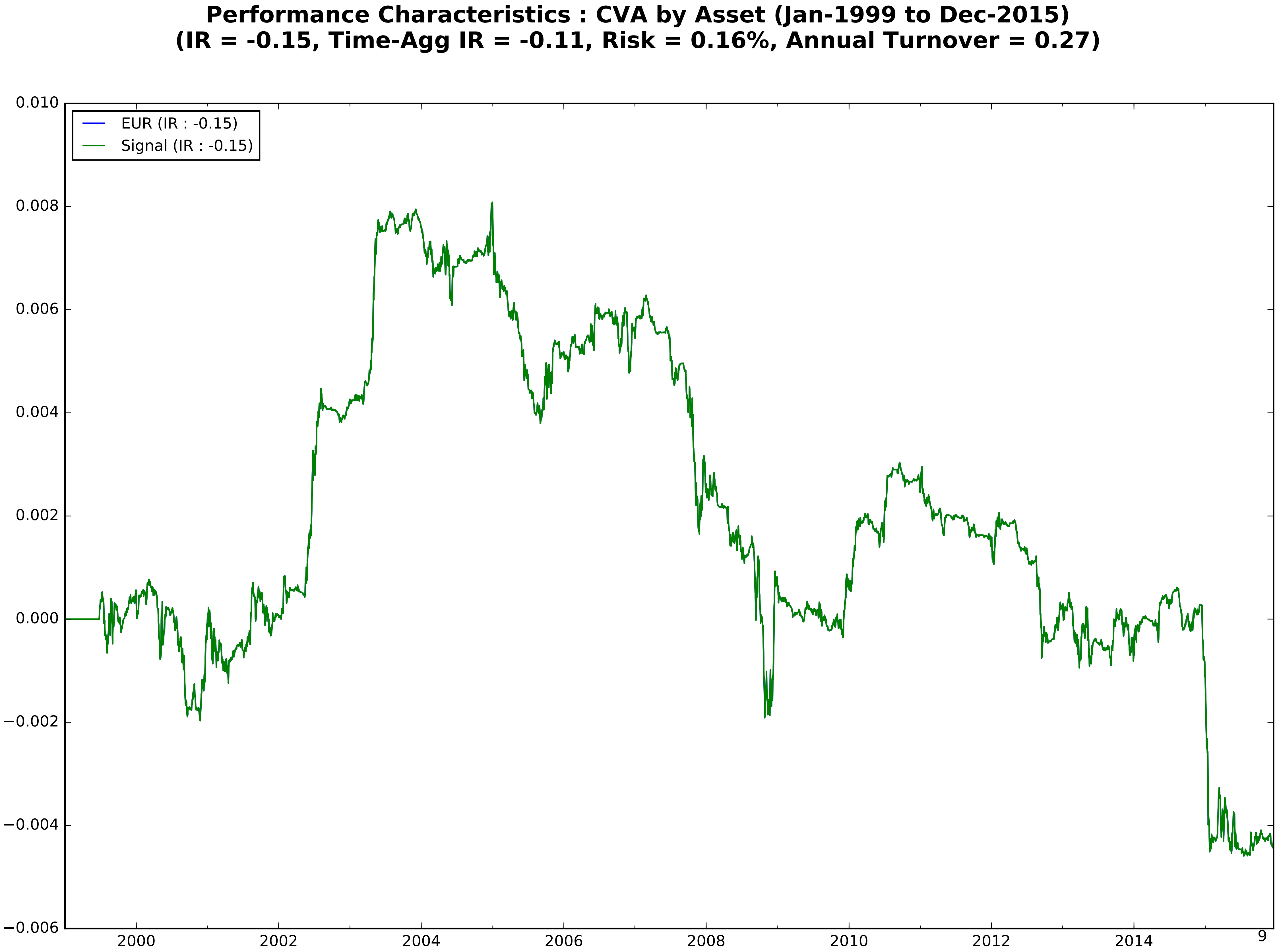


Signal Characteristics : Net Holdings (Jan-1999 to Dec-2015)
Net Holdings
0.08
0.06
0.04
0.02
0.00
−0.02
−0.04
−0.06
2000
2002
2004
2006
2008
2010
2012
2014

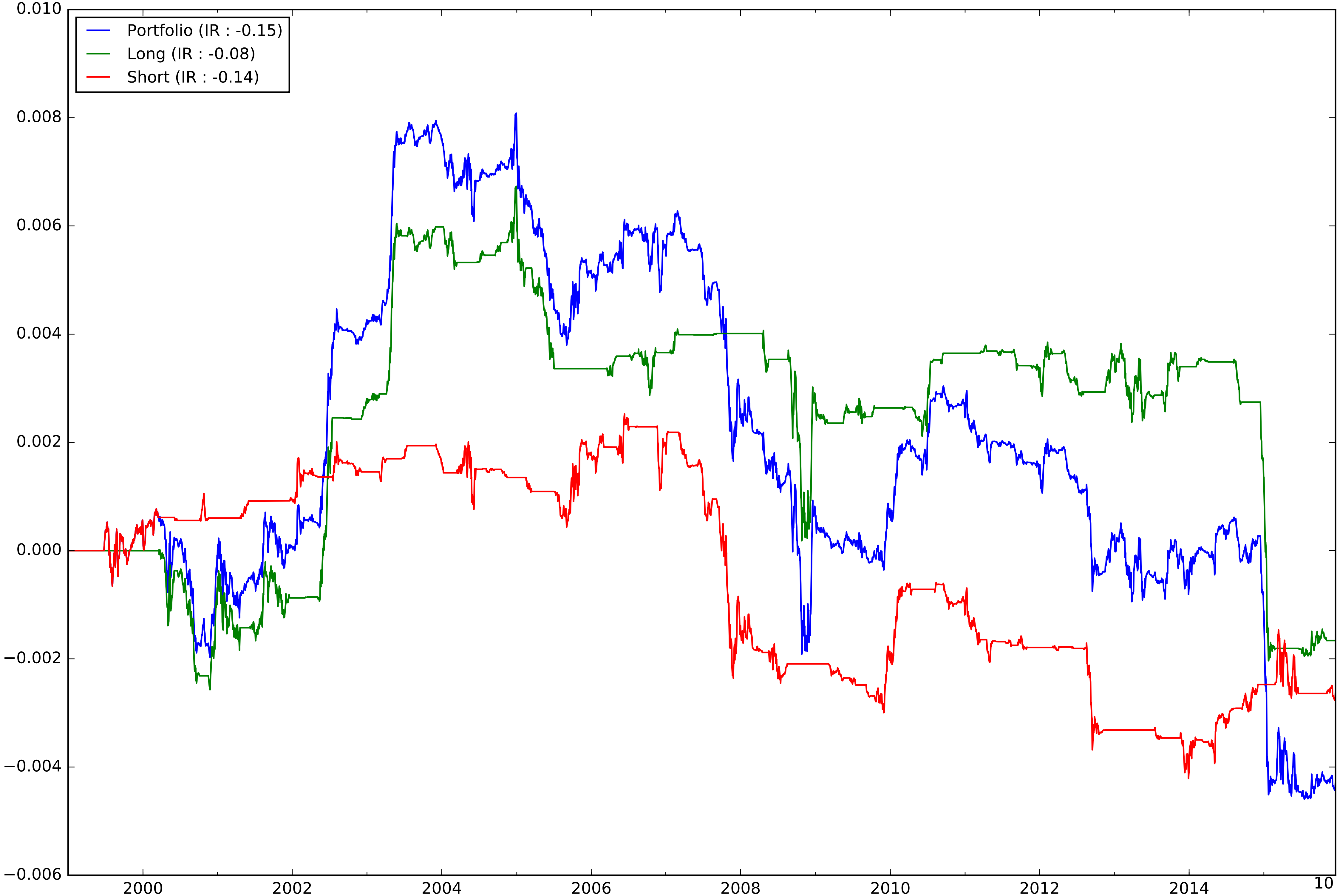

Performance Characteristics : Portfolio Returns Statistics (Jan-1999 to Dec-2015)
mean = -0.0000
median = 0.0000
stdev = 0.0001
skew = -0.1153
kurtosis = 7.8940
12000
10000
8000
6000
4000
2000
0
−0.0010
−0.0008
−0.0006
−0.0004
−0.0002
0.0000
0.0002
0.0004
0.0006
Portfolio Returns

Performance Characteristics : Portfolio Returns Normal Q-Q Plot (Jan-1999 to Dec-2015)




Performance Characteristics : CVA by Asset (Jan-1999 to Dec-2015)
(IR = -0.15, Time-Agg IR = -0.11, Risk = 0.16%, Annual Turnover = 0.27)
EUR (IR : -0.15)
Signal (IR : -0.15)
0.010
0.008
0.006
0.004
0.002
0.000
−0.002
−0.004
−0.006
2000
2002
2004
2006
2008
2010
2012
2014

Performance Characteristics : CVA by Longs and Shorts (Jan-1999 to Dec-2015)
(IR = -0.15, Time-Agg IR = -0.11, Risk = 0.16%, Annual Turnover = 0.27)



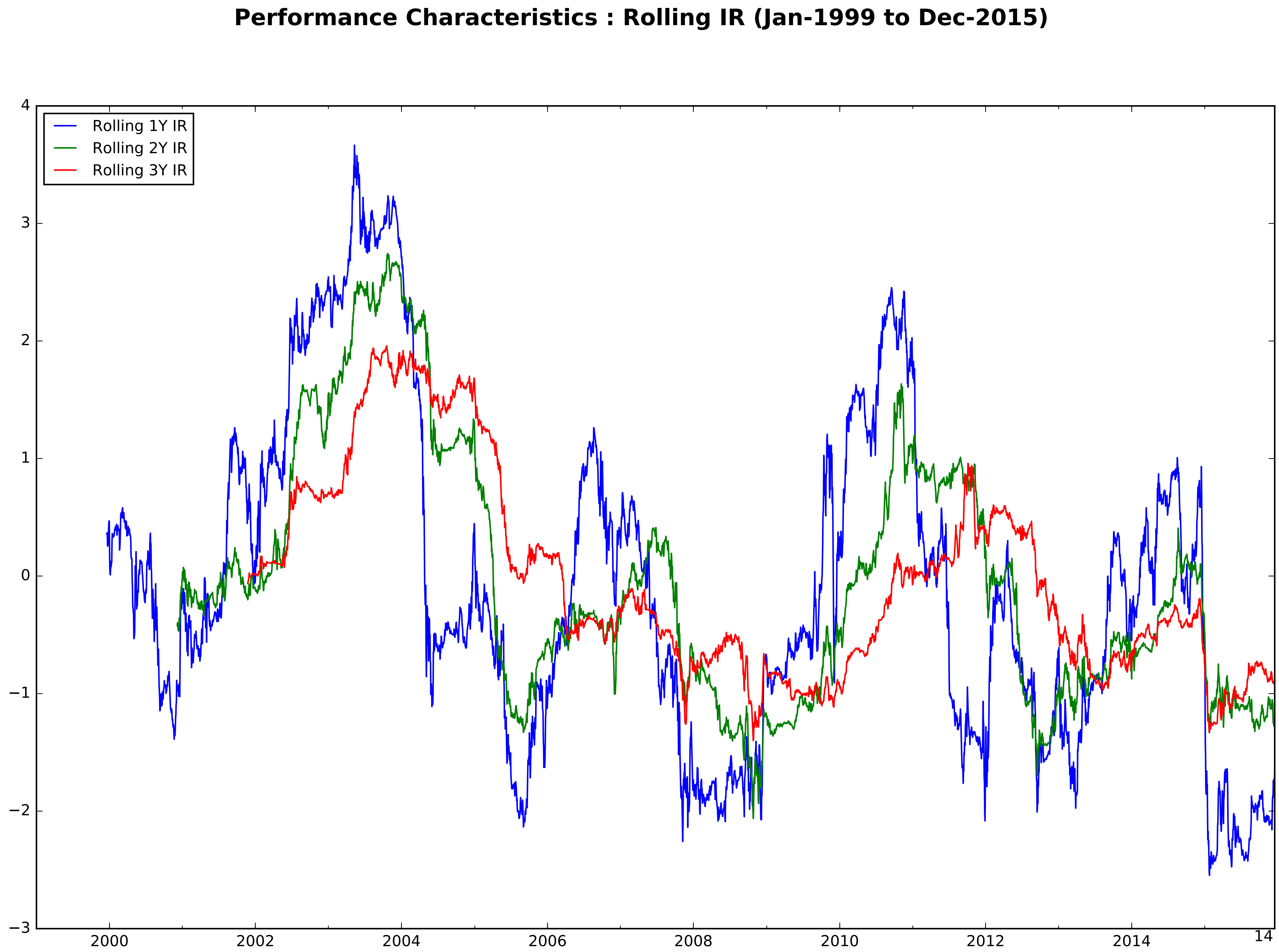

Performance Characteristics : CVA by Cross-sectional and Net (Jan-1999 to Dec-2015)
(IR = -0.15, Time-Agg IR = -0.11, Risk = 0.16%, Annual Turnover = 0.27)
Portfolio (IR : -0.15)
Cross-sectional (IR : -0.16)
Net (IR : -0.15)
0.010
0.008
0.006
0.004
0.002
0.000
−0.002
−0.004
−0.006
2000
2002
2004
2006
2008
2010
2012
2014

Performance Characteristics : Performance by Year (Jan-1999 to Dec-2015)

	No of Observations	IR	Annual Returns (in %)	Annual Risk (in %)
1999	261.0	0.46	0.05	0.12
2000	260.0	-0.35	-0.06	0.18
2001	261.0	0.08	0.02	0.18
2002	261.0	2.46	0.41	0.16
2003	261.0	2.63	0.32	0.12
2004	262.0	0.24	0.04	0.16
2005	260.0	-1.5	-0.27	0.18
2006	260.0	0.26	0.04	0.15
2007	261.0	-1.54	-0.28	0.18
2008	262.0	-0.8	-0.19	0.24
2009	261.0	0.08	0.01	0.1
2010	261.0	1.52	0.17	0.11
2011	260.0	-1.21	-0.09	0.08
2012	261.0	-0.94	-0.13	0.13
2013	261.0	-0.51	-0.09	0.17
2014	261.0	-0.34	-0.04	0.12
2015	251.0	-1.52	-0.31	0.21

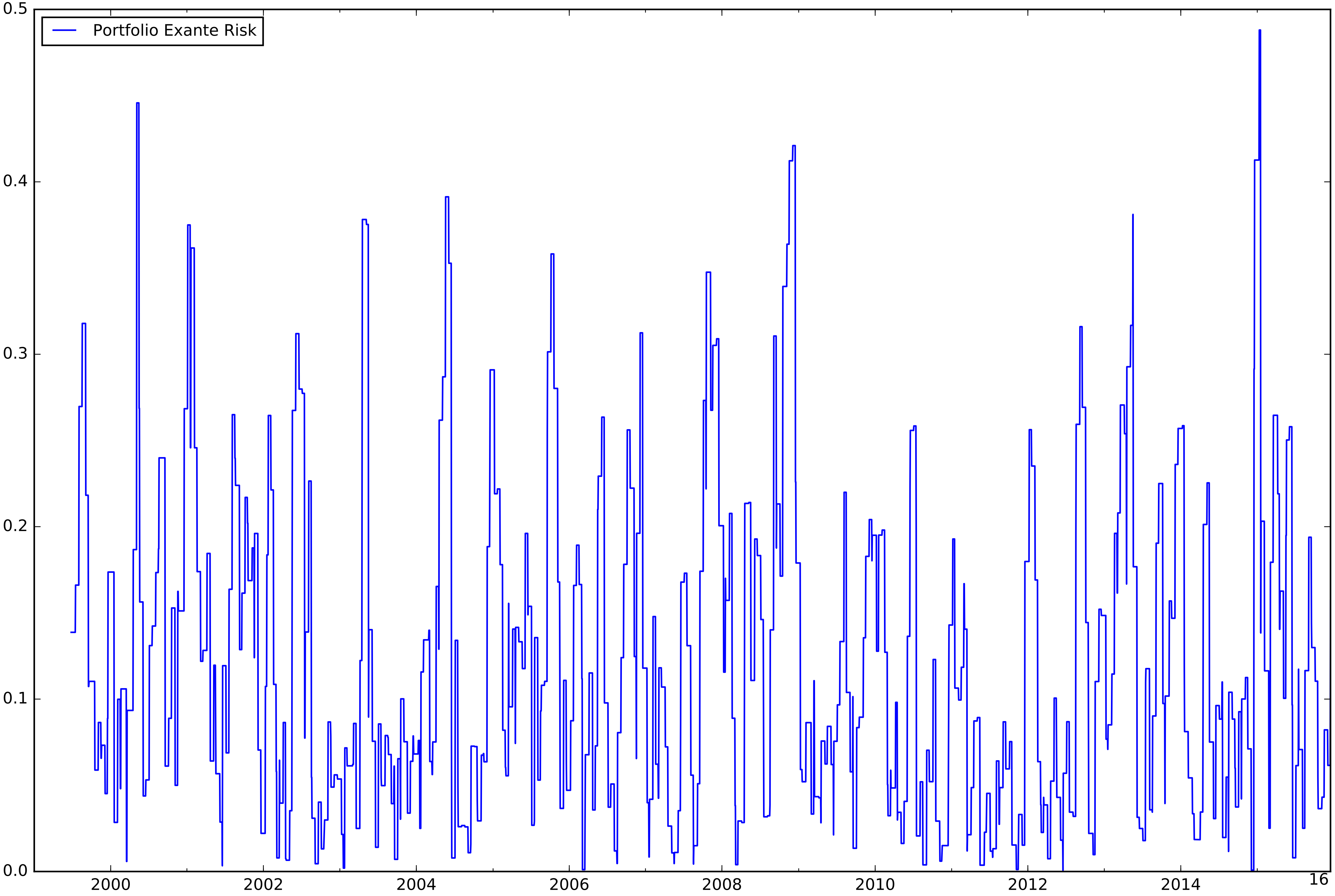
Performance Characteristics : Performance by Month (in %) (Jan-1999 to Dec-2015)

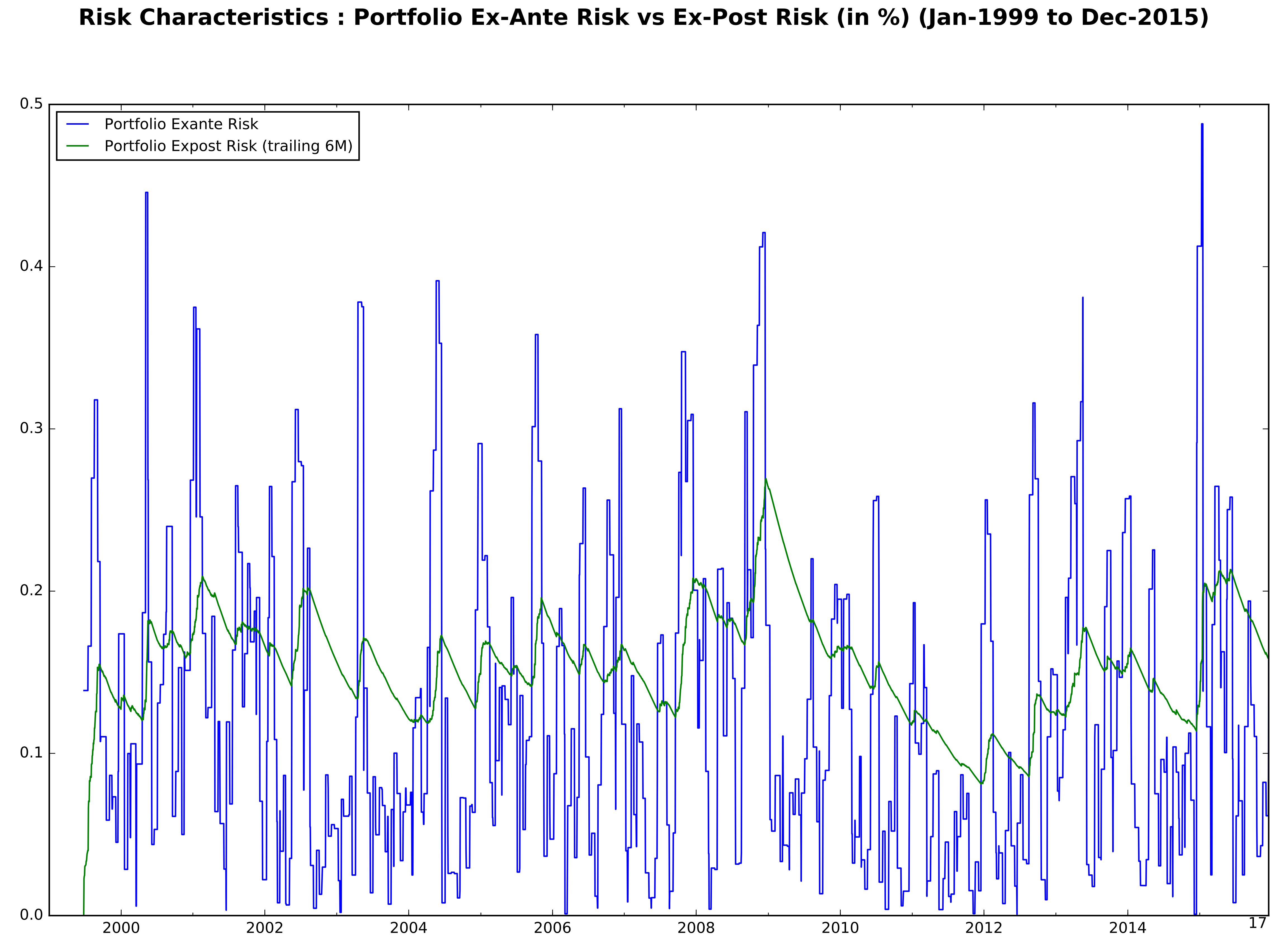
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
1999	0.0	0.0	0.0	0.0	0.0	0.02	-0.06	0.04	0.0	-0.0	0.04	0.01	0.06
2000	-0.0	0.02	-0.02	-0.09	0.04	0.02	-0.04	-0.08	-0.07	0.02	0.01	0.14	-0.07
2001	-0.04	-0.01	-0.04	0.02	0.02	-0.01	0.02	0.08	-0.01	-0.02	0.0	-0.01	0.02
2002	0.08	-0.02	0.0	-0.01	0.08	0.19	0.09	-0.0	-0.01	-0.01	-0.01	0.03	0.42
2003	-0.0	0.01	0.02	0.14	0.16	-0.01	0.02	-0.02	0.01	0.0	0.02	-0.03	0.33
2004	-0.07	0.0	-0.01	0.02	-0.06	0.05	0.01	-0.0	0.02	0.0	0.01	0.07	0.04
2005	-0.13	-0.03	-0.04	-0.01	-0.07	-0.04	-0.05	-0.02	0.05	0.02	0.05	-0.01	-0.28
2006	-0.02	0.04	-0.02	0.03	-0.01	0.04	0.01	-0.0	-0.02	0.02	-0.09	0.06	0.04
2007	0.03	0.04	-0.04	-0.03	0.0	-0.03	-0.05	0.01	-0.09	-0.1	-0.08	0.04	-0.3
2008	-0.02	-0.02	-0.01	-0.05	0.0	-0.04	-0.01	0.02	-0.09	-0.21	0.01	0.21	-0.2
2009	-0.03	-0.0	-0.02	-0.0	0.02	-0.01	-0.0	-0.01	-0.03	0.03	-0.03	0.1	0.01
2010	0.07	0.04	0.02	-0.01	-0.02	-0.01	0.12	0.01	-0.01	-0.02	0.0	-0.03	0.18
2011	-0.02	-0.01	-0.01	-0.04	0.04	0.0	-0.01	-0.0	-0.01	-0.02	0.0	-0.01	-0.1
2012	0.03	0.01	-0.01	0.01	-0.06	0.01	-0.03	-0.05	-0.08	-0.02	0.04	0.03	-0.13
2013	0.02	-0.07	-0.05	0.1	-0.09	0.02	-0.01	-0.01	0.07	0.0	-0.02	-0.05	-0.09
2014	0.07	0.01	-0.01	-0.02	0.06	-0.02	0.04	-0.04	-0.01	0.0	0.01	-0.13	-0.04
2015	-0.33	0.02	0.06	-0.06	0.04	-0.06	-0.0	0.01	0.01	0.01	0.01	-0.01	-0.31


Performance Characteristics : Rolling IR (Jan-1999 to Dec-2015)
Rolling 1Y IR
Rolling 2Y IR
Rolling 3Y IR
4
3
2
1
0
−1
−2
−3
2000
2002
2004
2006
2008
2010
2012
2014

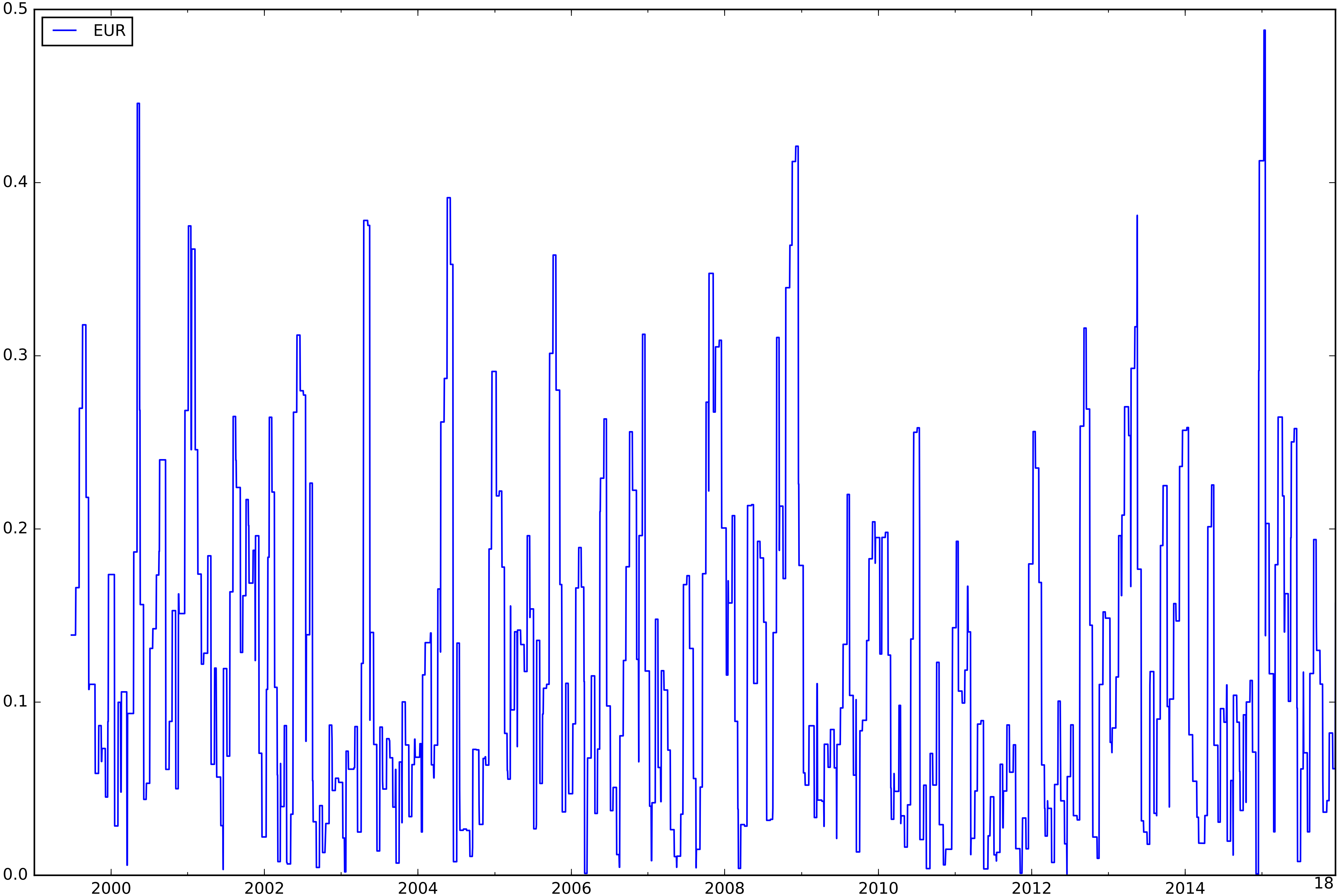
Performance Characteristics : Rolling IR by Asset (Jan-1999 to Dec-2015)

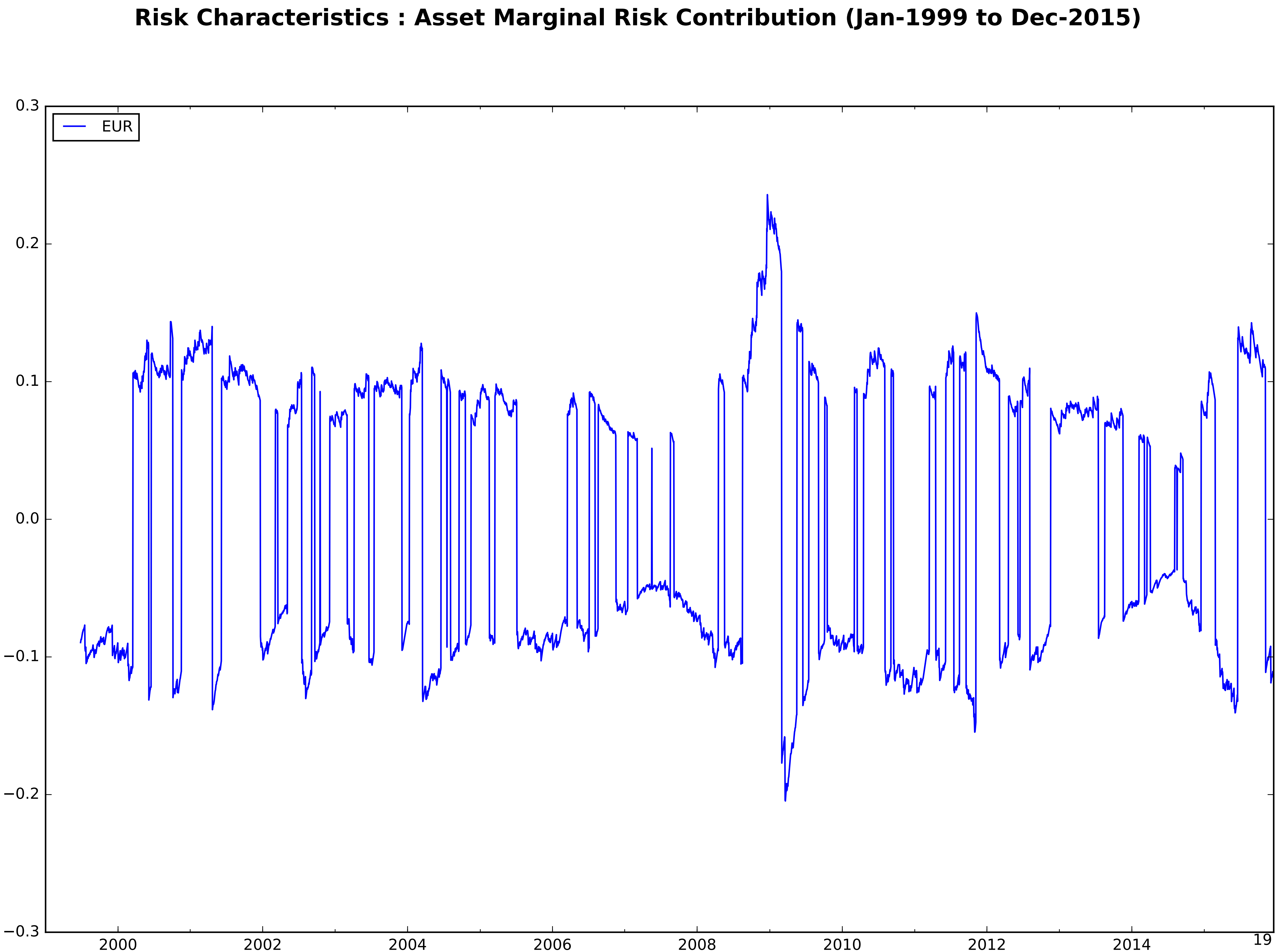
Risk Characteristics : Portfolio Ex-Ante Risk (in %) (Jan-1999 to Dec-2015)



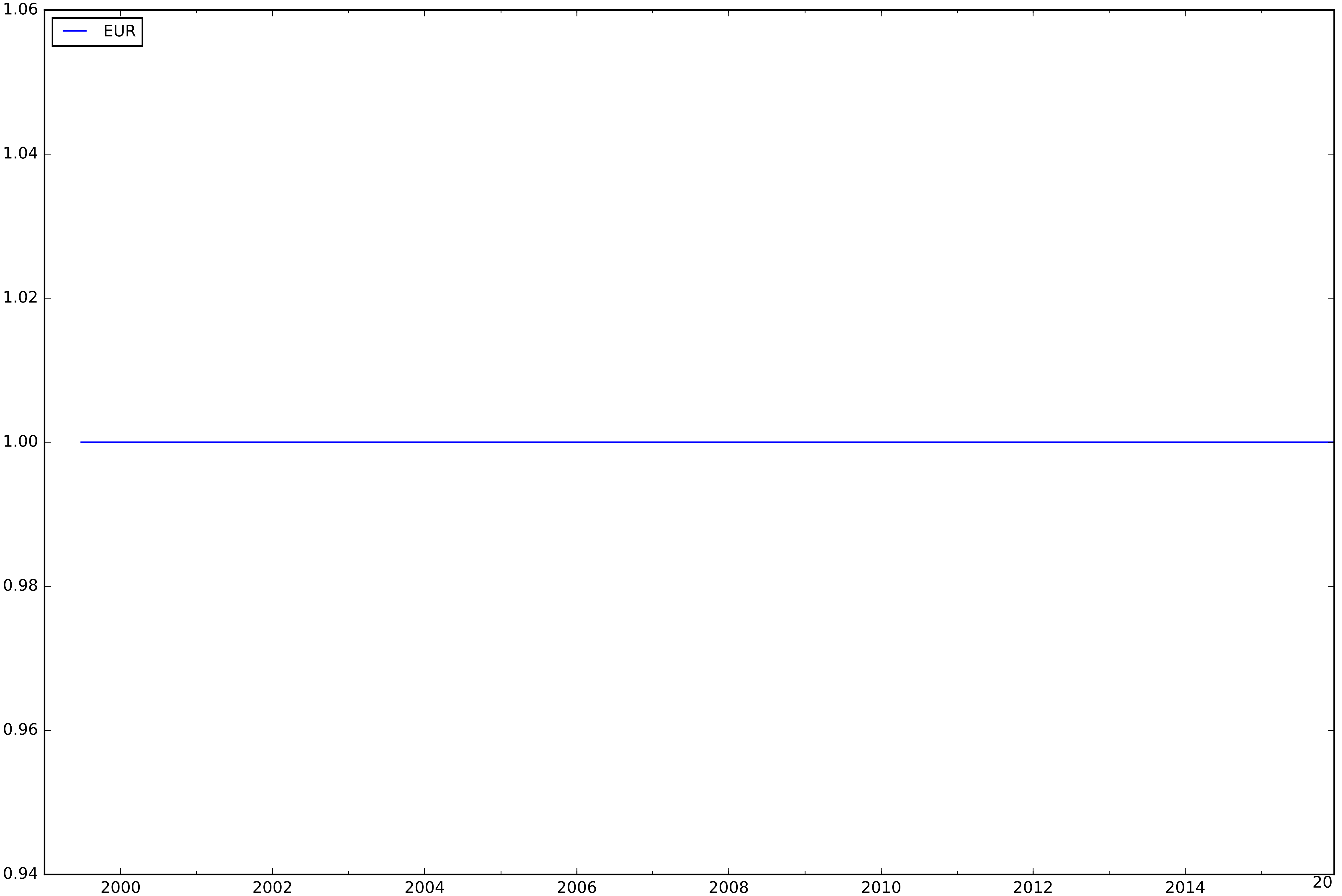

Risk Characteristics : Portfolio Ex-Ante Risk vs Ex-Post Risk (in %) (Jan-1999 to Dec-2015)
Portfolio Exante Risk
Portfolio Expost Risk (trailing 6M)
0.5
0.4
0.3
0.2
0.1
0.0
2000
2002
2004
2006
2008
2010
2012
2014

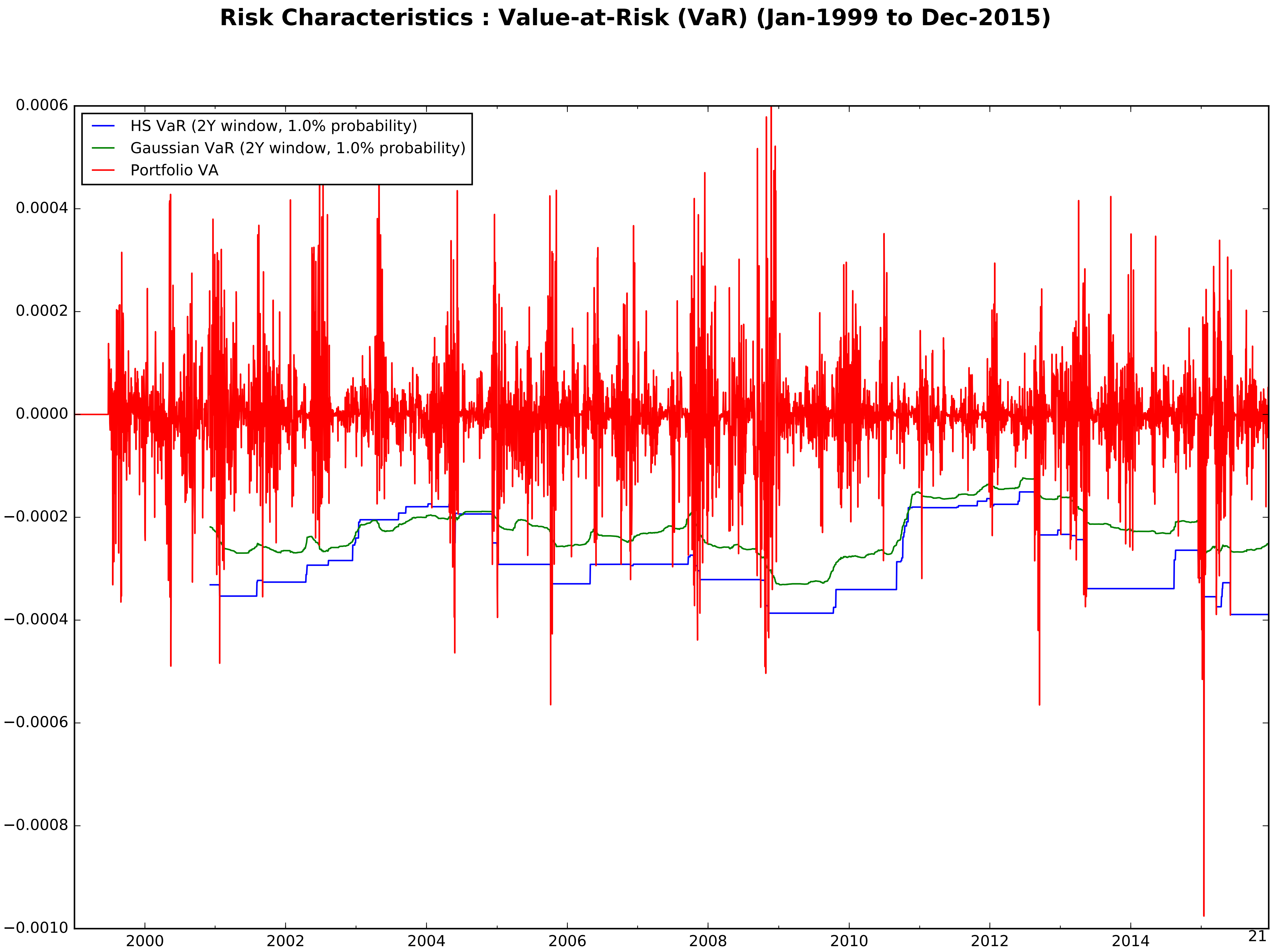
Risk Characteristics : Asset Risk Contribution (in %) (Jan-1999 to Dec-2015)



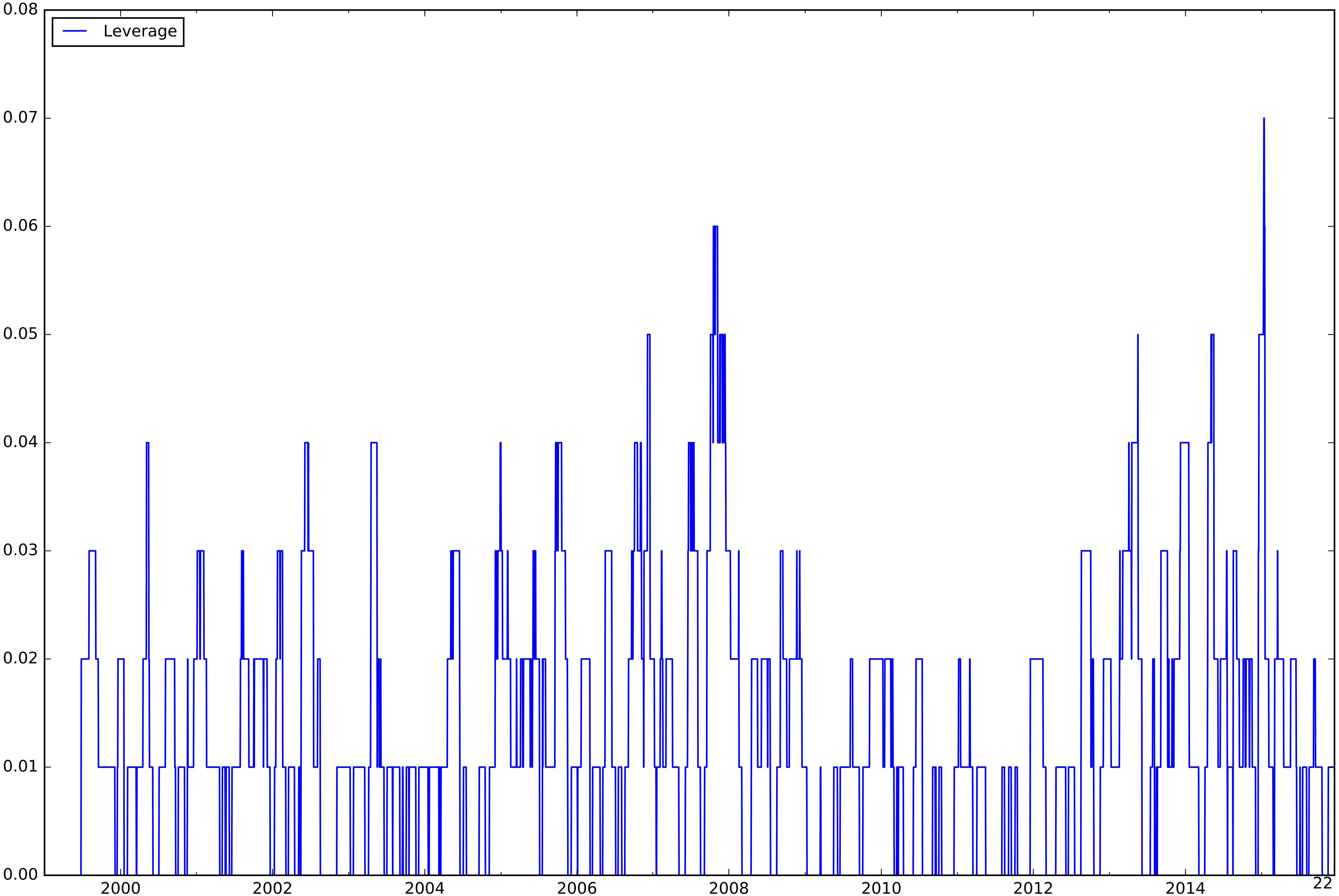

Risk Characteristics : Asset Marginal Risk Contribution (Jan-1999 to Dec-2015)
EUR
0.3
0.2
0.1
0.0
−0.1
−0.2
−0.3
2000
2002
2004
2006
2008
2010
2012
2014

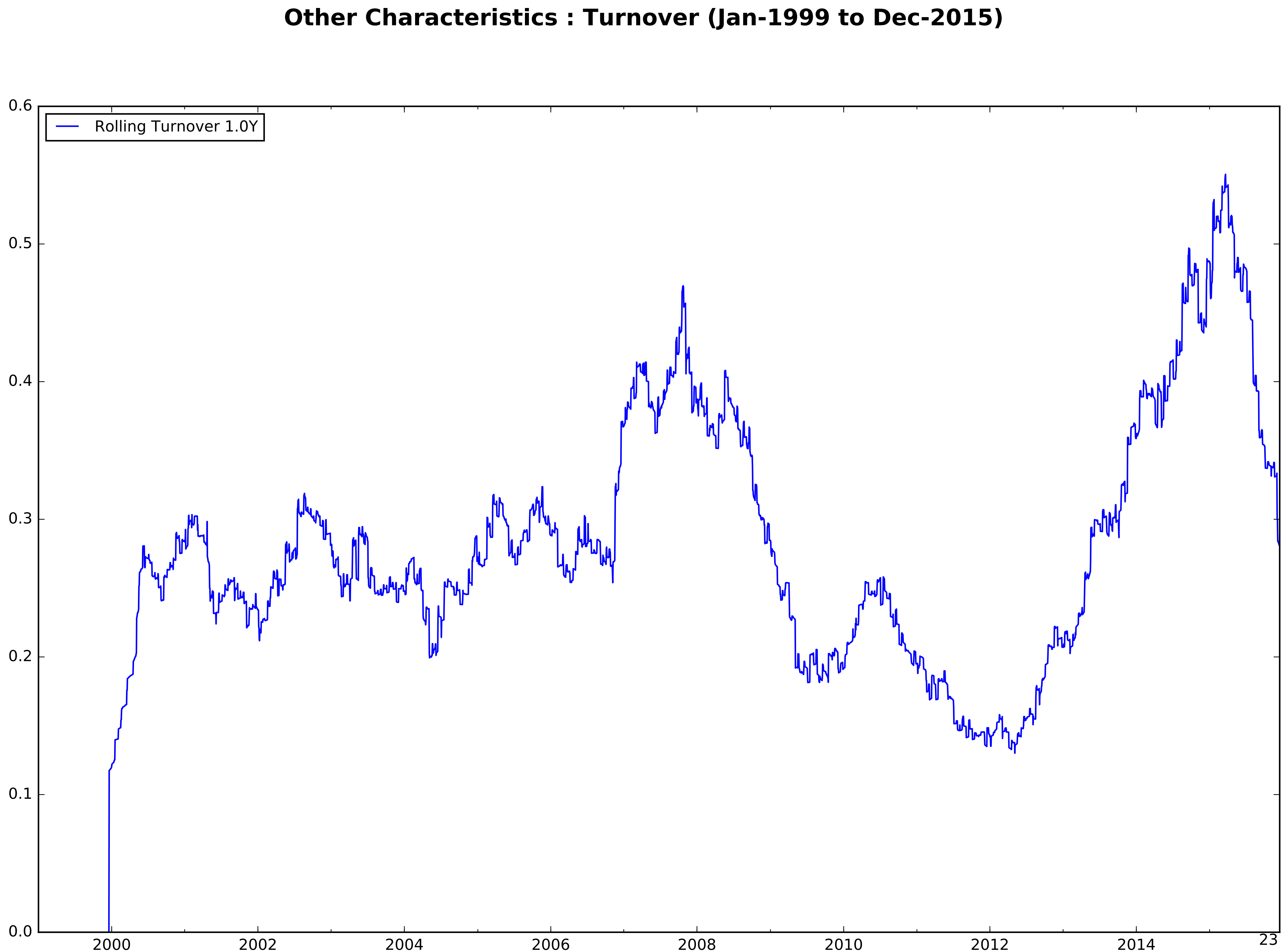
Risk Characteristics : Asset Risk Weight (Jan-1999 to Dec-2015)



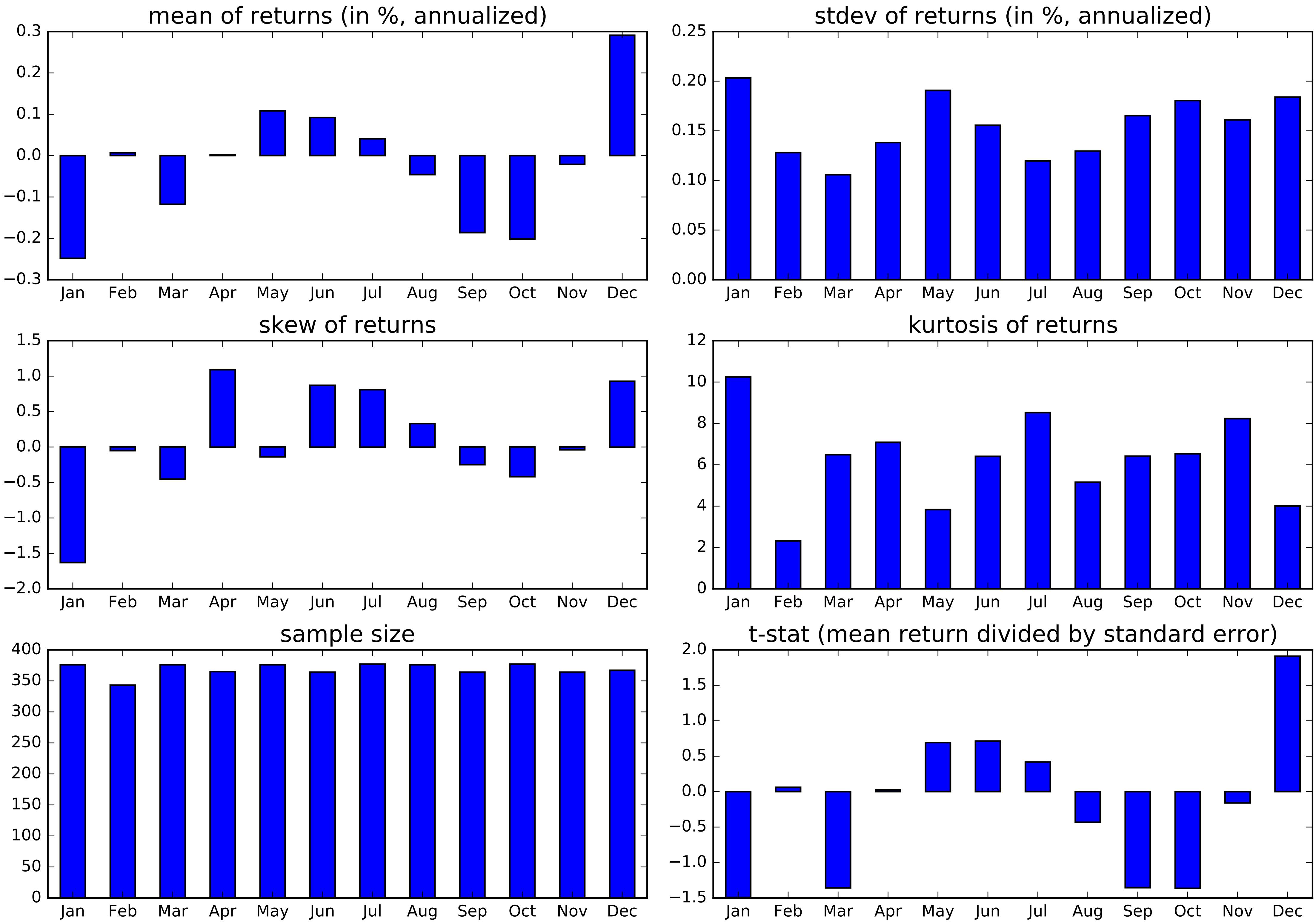

Risk Characteristics : Value-at-Risk (VaR) (Jan-1999 to Dec-2015)
HS VaR (2Y window, 1.0% probability)
Gaussian VaR (2Y window, 1.0% probability)
Portfolio VA
0.0006
0.0004
0.0002
0.0000
−0.0002
−0.0004
−0.0006
−0.0008
−0.0010
2000
2002
2004
2006
2008
2010
2012
2014

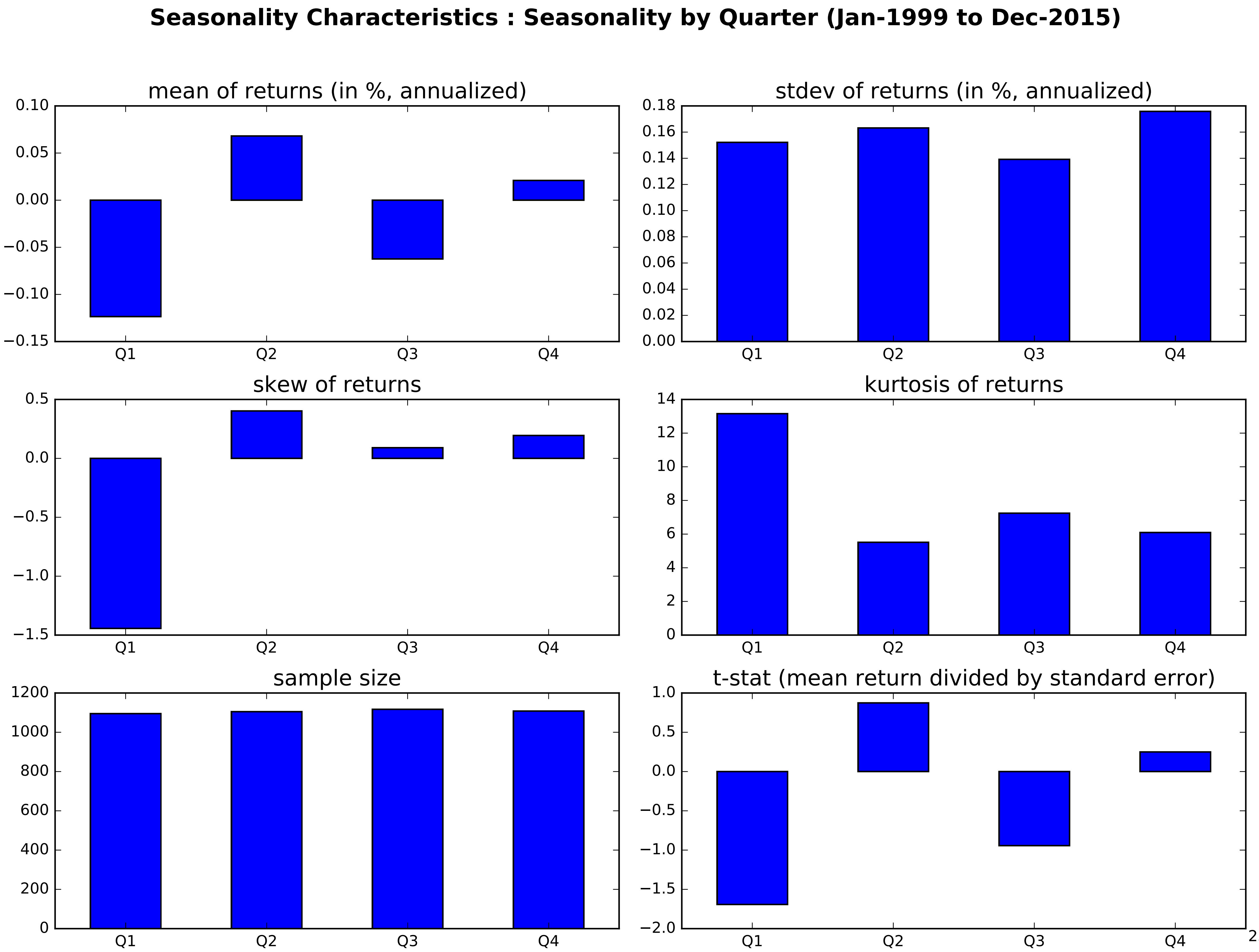
Other Characteristics : Leverage (Jan-1999 to Dec-2015)



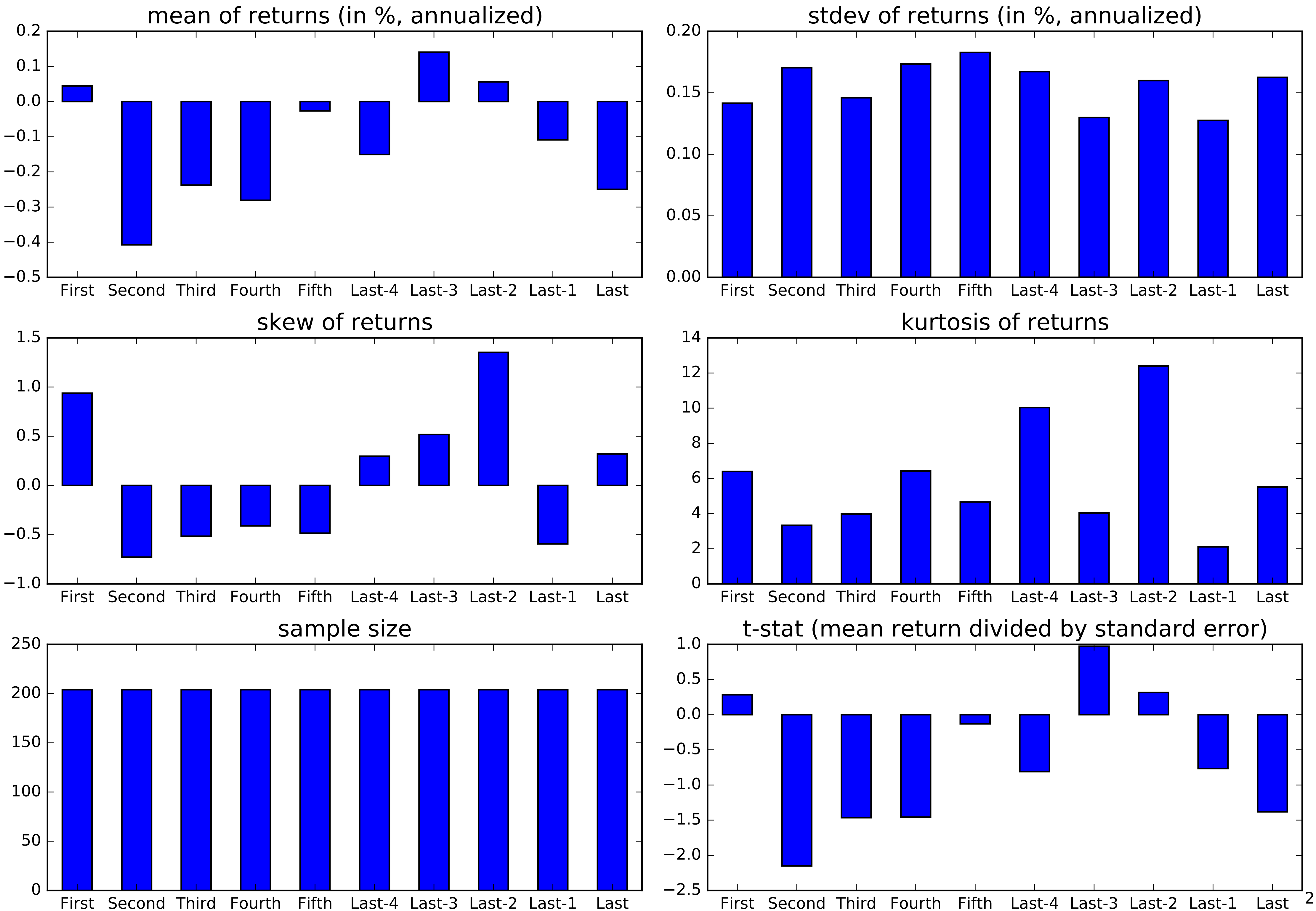

Other Characteristics : Turnover (Jan-1999 to Dec-2015)
Rolling Turnover 1.0Y
0.6
0.5
0.4
0.3
0.2
0.1
0.0
2000
2002
2004
2006
2008
2010
2012
2014

Seasonality Characteristics : Seasonality by Month (Jan-1999 to Dec-2015)

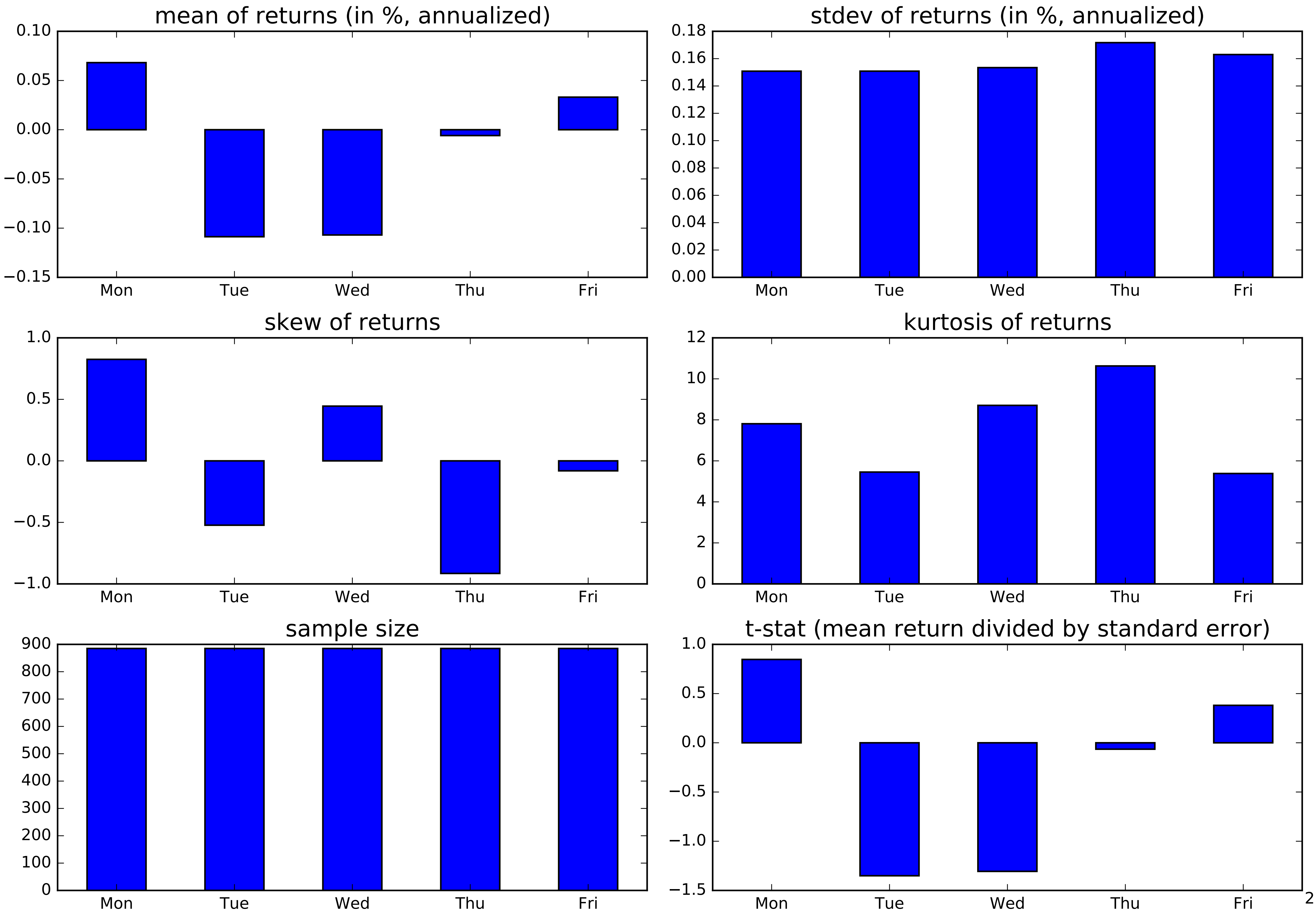



Seasonality Characteristics : Seasonality by Quarter (Jan-1999 to Dec-2015)
mean of returns (in %, annualized)
stdev of returns (in %, annualized)
skew of returns
kurtosis of returns
sample size
t-stat (mean return divided by standard error)
Q1
Q2
Q3
Q4

Seasonality Characteristics : Seasonality by Business Day of Month (Jan-1999 to Dec-2015)



Seasonality Characteristics : Seasonality by Day of Week (Jan-1999 to Dec-2015)



Drawdown Characteristics : Top 5 Drawdown Periods (Jan-1999 to Dec-2015)

	From	Trough	To	Depth (in %)	Length (in days)	Slump (in days)	Recovery (in days)
1	31-Dec-2004	17-Jul-2015	17-Dec-2015	-1.27	2860.0	2751.0	109.0
2	09-Mar-2000	24-Nov-2000	28-Jan-2002	-0.27	493.0	187.0	306.0
3	05-Dec-2003	07-Jun-2004	27-Dec-2004	-0.19	277.0	132.0	145.0
4	13-Jul-1999	05-Aug-1999	30-Dec-1999	-0.12	123.0	18.0	105.0
5	03-Jan-2000	06-Jan-2000	07-Feb-2000	-0.06	26.0	4.0	22.0

Drawdown Characteristics : Drawdown Profile (in %) (Top 5 highlighted) (Jan-1999 to Dec-2015)