

PIRAEUS BANK



GREEK FIXED INCOME MONITOR:

TURBULENCE IN THE BOND MARKET DUE TO BREXIT



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ECONOMIC ANALYSIS & INVESTMENT STRATEGY

JUNE 2016

Piraeus Bank Government Bond Index: {PBGGGSBI Index<GO>}

Weighted Average Yield: {PBGGGWAY Index<GO>}

Piraeus Bank Government Bond Index : {PBGGGCBI Index<GO>}

Weighted Average Yield : {PBGGIWAY Index<GO>}

Latest Developments in the Greek Bond Market

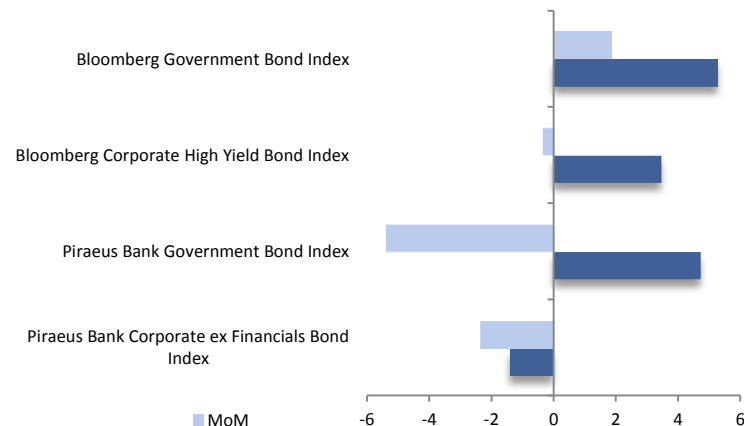
Greek Government Bonds Interest Rate Curve Estimation

Piraeus Bank Greek Government Bond Index

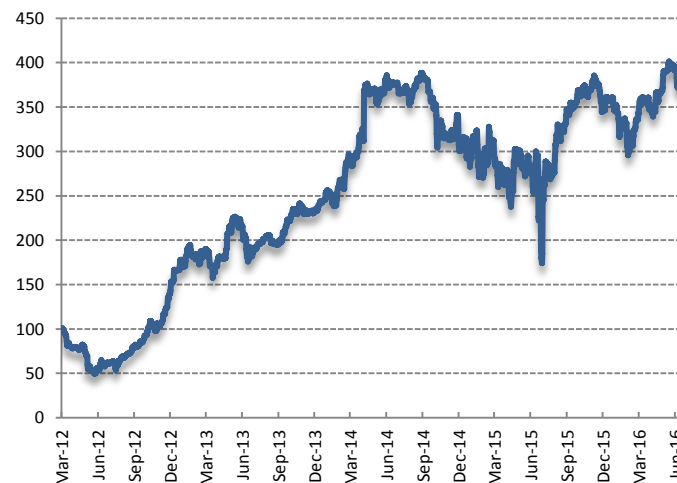
Piraeus Bank Greek Corporate Bond Index

- The Greek government bond market has tried, throughout the preceding 3-month period to balance two opposing forces. On the one hand, expectations of a successful completion of the evaluation of the 3rd Economic Policy Program, as well as anticipation of the waiver of Greek bonds by the ECB, created a positive environment, defining the end of a period of increased policy uncertainty and liquidity constraints. As a result, the Government Bond Index reached the historical high of 401.34 points at the end of May. However, the increased volatility and low risk tolerance of investors before and especially after the British referendum on whether or not to stay in the European Union, created negative pressures on the Greek bond market. The resulting movements in international markets led to a -4.7% drop in value for the index on 13/6 and 14/6. Moreover, the unexpected result of the referendum was accompanied by significant losses in the Greek bond market with the index recording a decrease of 5.09% on Friday, June 24th. In conclusion, the balance of these two opposing forces led the Government Bond Index to fall by 5.38% in June while, at the same time, remaining 4.7% higher than at the beginning of the year.
- Positive developments in the bond market are expected to result from the ECB's decision concerning the participation of the country in the quantitative easing program. However, such a decision depends on the swift and successful completion of the second evaluation as well as on concrete measures to achieve a sustainable path for Greek debt in the future. A possible delay in the decision of the ECB is expected to extend the highly uncertain state of Greek financial markets, thus strengthening the sensitivity of Greek bonds to international and domestic economic surprises.

Indices Performance

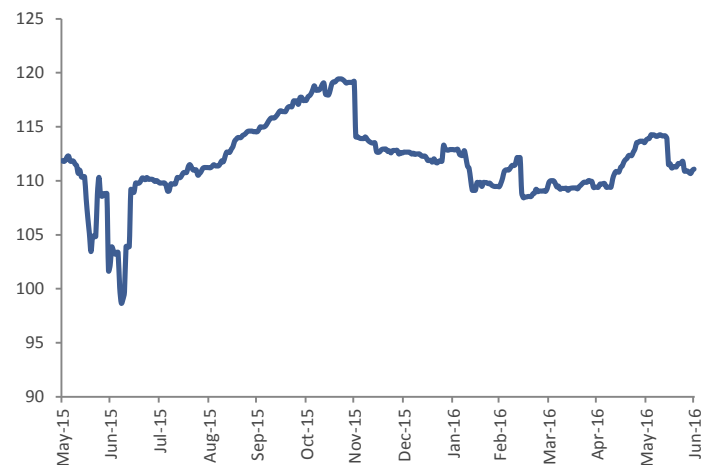


Government Bond Index

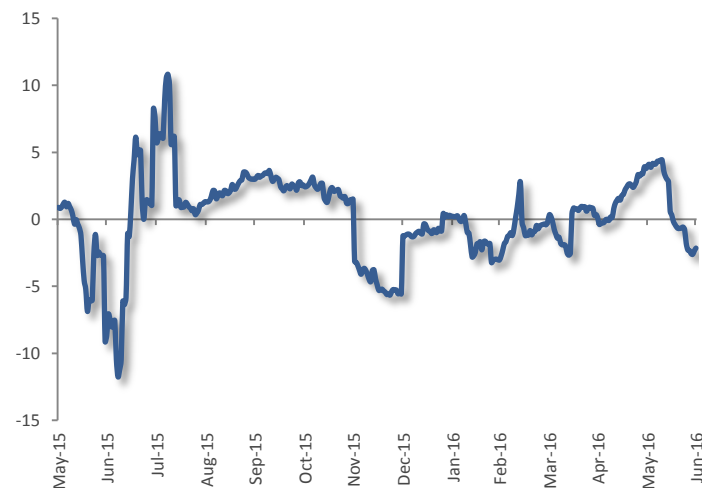


- Negative dynamics and significant losses were also recorded for the corporate bond market as the high volatility reinforced the difficulty in pinpointing the mechanisms through which the private sector may be affected by the outcome of the British referendum. Specifically, in June the Corporate Bond Index fell 2.16% from its level of 113.8 points in late May. Moreover, the index is still moving below the levels recorded at the beginning of the year, losing nearly 1.4% of its value since then.
- Significant losses were recorded for the PPC bonds as the intention to cede 400,000 customers to other electricity providers via a bid auction as well as its strong connection with the public sector was viewed negatively by the markets. An analogous decrease was recorded by both the OTE bonds as well as the bonds issued by Hellenic Petroleum and INTRALOT. In general, corporate bonds whose activities are closely related to the public sector exhibit greater sensitivity when the economic environment is characterized by high uncertainty. Investment interest in Greek corporate bonds remains subdued as the volatility of the Greek market is still high. In addition, the exclusion of Greek bonds from the quantitative easing program makes them uncompetitive compared with those of other European markets. Finally, global economic uncertainty and the loose monetary policy of central banks have driven the yields on corporate bonds to extremely low levels so that investors are pushed towards higher returns in other financial products. Nevertheless, despite the high yields recorded by Greek corporate bonds, increased risk aversion in the current international economic environment makes investors hesitant.

Corporate Bond Index

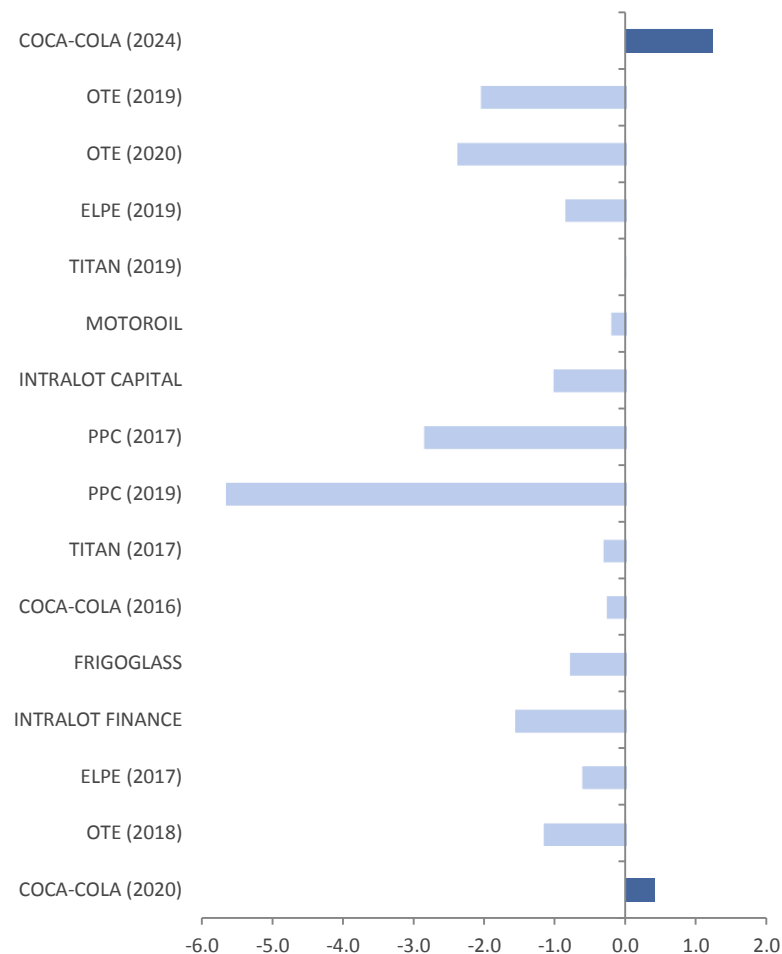


Corporate Bond Index (MoM Returns)



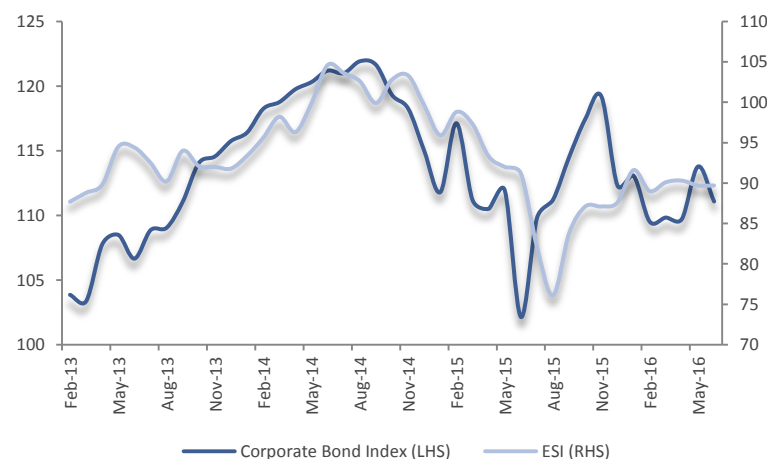
- The three worst monthly performances were recorded by the following bonds:
 - PPC (-5.65%) with maturity in 2019
 - PPC (-2.86%) maturing at end-2017
 - OTE (-2.4%) maturing at end-2020
- The two best performances were recorded by the following bond issues:
 - COCA-COLA (1.23%) maturing in 2024
 - COCA-COLA (0,41%) maturing in 2020
- On June 6, TITAN Global Finance issued a €250mn. non-callable bond with a 5 year maturity. Eventually, the amount of the issue reached €300 million with coupon of 3.5% paid semi-annually. Trading of the bond in the secondary market began on 17.06.2016, the date on which it was also integrated into the Piraeus Bank Corporate Bond Index.
- On June 18, 2016 there was a coupon payment for the Coca-Cola bond maturing in June 2020.

Monthly Performance of Corporate Bond Index Members

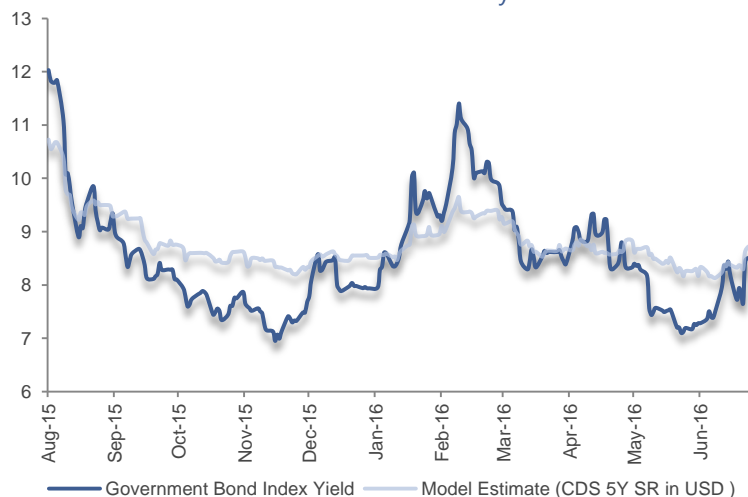


- The expectations for the Greek economy, as reflected by the Economic Sentiment Indicator (ESI), remained unchanged in June, leaving the discrepancies between bond markets and the macroeconomic environment to remain noteworthy. Specifically, the Corporate Bond Index declined in June by 2.16% while the ESI remained unchanged at 89.7.
- Credit risk, which according to our estimates is an important factor driving changes in the Government Bond Index, recorded a slight increase in late June with the 5-year CDS increasing by 43 basis points from 968 basis points in late May. It is worth noting that on June 24, following the Brexit decision in the British referendum, the 5-year CDS rose from 975 bps the previous day to 1147 bps while a significant normalization occurred in the following days. Despite the current low CDS levels at the end of June, the projection of the impact of credit risk on the yield of the Government Bonds Index continues to show that the statistical model implied estimate is 30 bps higher than the actual yield of the Index.

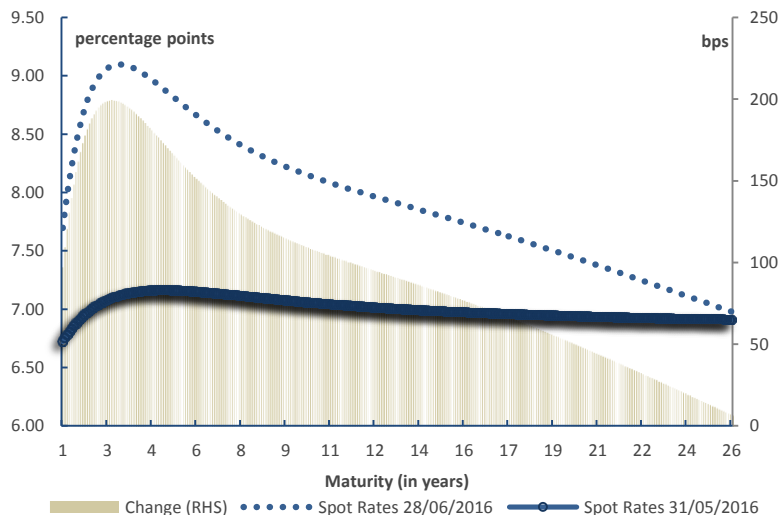
Correlation of Corporate Bond Index & ESI



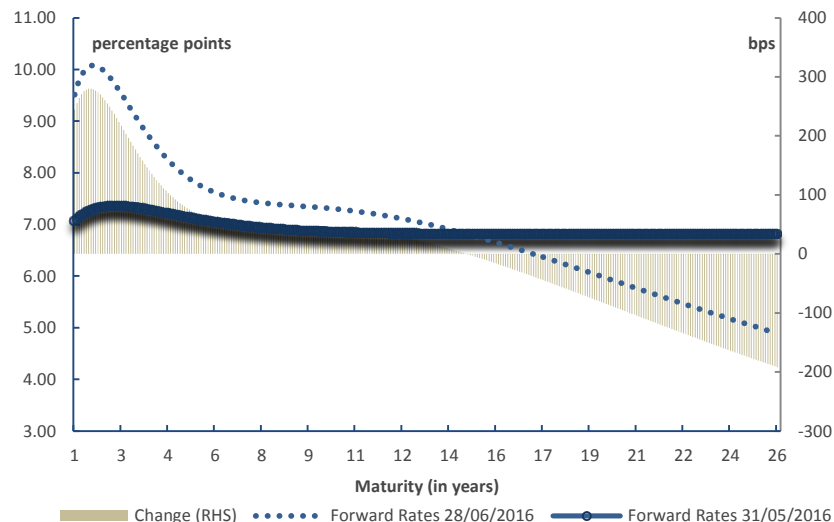
Government Bonds Yield to Maturity Model Estimate



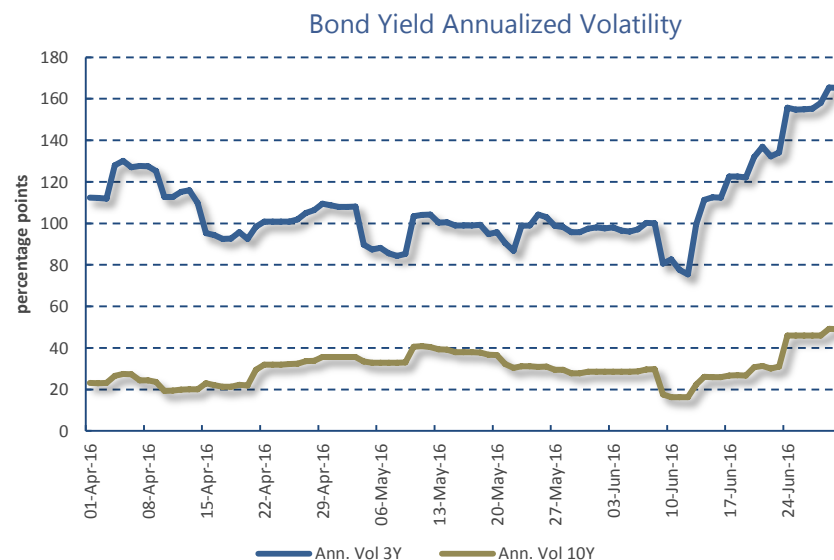
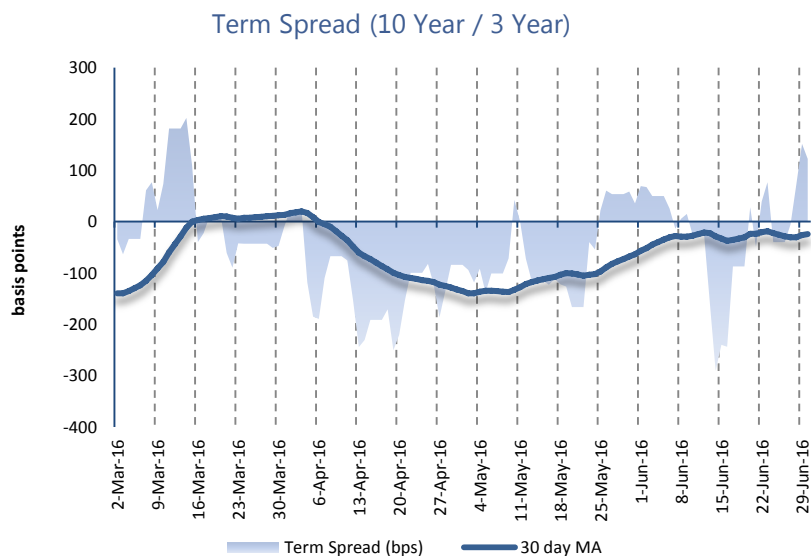
Estimated Interest Rate Curve



Estimated Forward Rate Curve

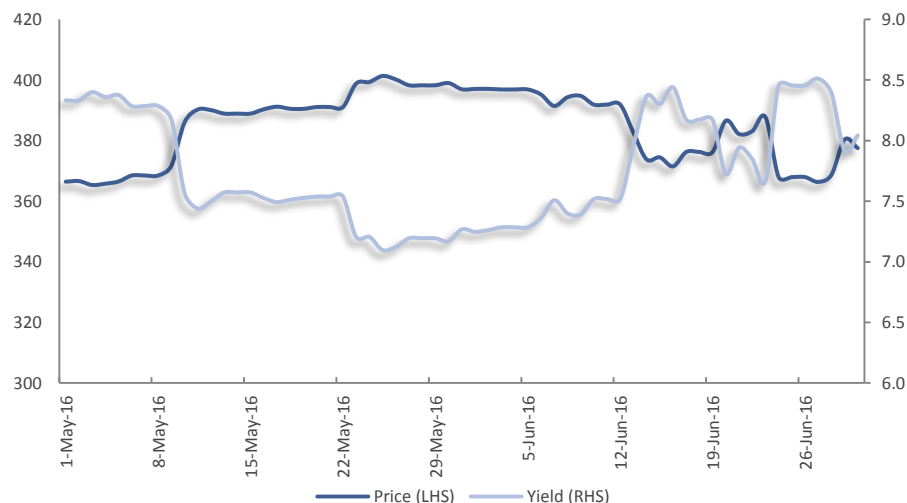


- In June a significant increase was observed in the estimated interest rates of short- and medium-term maturities while smaller increases were also recorded for the long end of the curve. The uncertainty due to international developments is expected to keep short-term interest rates at high levels, reflecting the premium that the market asks in order to be exposed to the non-systematic risk of the Greek economy. Specifically, in late June interest rates for 3-Year maturities recorded an increase of 198 basis points, offsetting the favourable valuations observed last month. Similarly, interest rates on medium-term maturities rose by 167 bps for 5-Year bonds and 109 bps for issues with maturity of 10 years. Issues of more than 20 years showed smaller but equally significant upward changes of between 7 (26 years) and 48 (20 years) bps.
- From the estimates of the one month forward rate curve, we observe that the short-term (2-3 years) forward rates for the next month are expected to approach 9.2%. In contrast, expectations for the medium part of the curve are for a reduction from current levels, ranging between 6.3% (10 years) and 7.9% (5 years). Relative to the market's expectations in May, the short end of the curve is quite high while small upward shifts are also observed for medium-term maturities. However, forward rates for long maturities (over 16 years) recorded a decrease of 85 bps (on average) relative to May's levels.

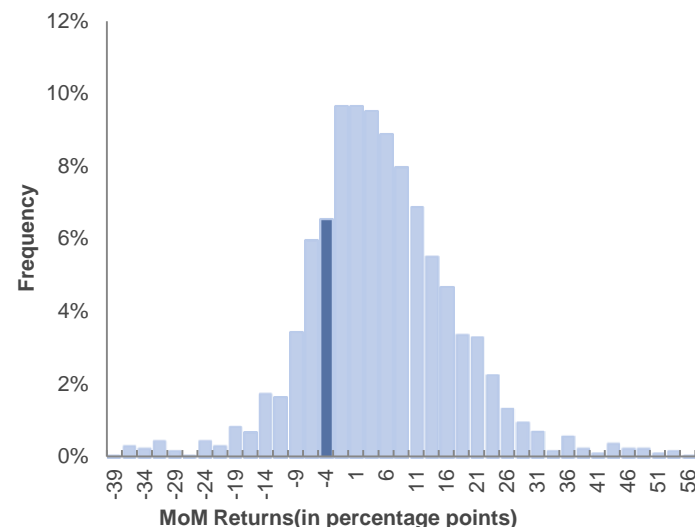


- The 30-day moving average for the term spread remained marginally negative for almost the entire duration of June despite the slope reversal signals observed in the previous month. The 10-year/3-year term spread evolved with high volatility during the month, recording negative levels in the first 15 days of June and returning to positive values after the British referendum. Specifically, the 10-year/3-year spread ranged between -244 (on June 16) and 152 basis points (on June 29). The high volatility of the interest rate spread recorded in mid-June, the bond rally last month and the concerns about the increasing uncertainty of the British referendum outcome put pressure on investors to reduce their positions in countries characterized by high risk. Typically, the yield to maturity of the 3-Year government bond (maturing in July 2017) reached 11.26% on 14 June, 460 basis points higher than at the beginning of the month. On the referendum day, the yield to maturity reached 7%, rising by a further 200 basis points during the next few days.
- Uncertainty about the international financial environment and the anticipated difficulties of the forthcoming second evaluation of the Greek programme caused increased volatility in the Greek bond market. Specifically, the volatility of the 3-Year bond rose by 70 points from 97.5 points at the end of the previous month. A smaller increase was recorded for the annualized volatility of 10-Year bond, which was observed to be 21.3 points higher relative to late May, reaching 49.12 points.

Index Evolution June 2016 (Base Date: 9/3/12=100)



MoM Return Histogram



- The lowest price in June for the index was 366.37, while the highest price was 397.08.
- The value of the Greek Government Bond Index on June 30th was 5.38% lower than in the previous month. The index's average (MoM) return in the same month was -0.39%.
- From the analysis of historical data we observe that the index MoM return at the end of June was higher than 16% of realized past returns. Returns, lower or equal to the level of -5.38% were observed on average only 5 days during a month.

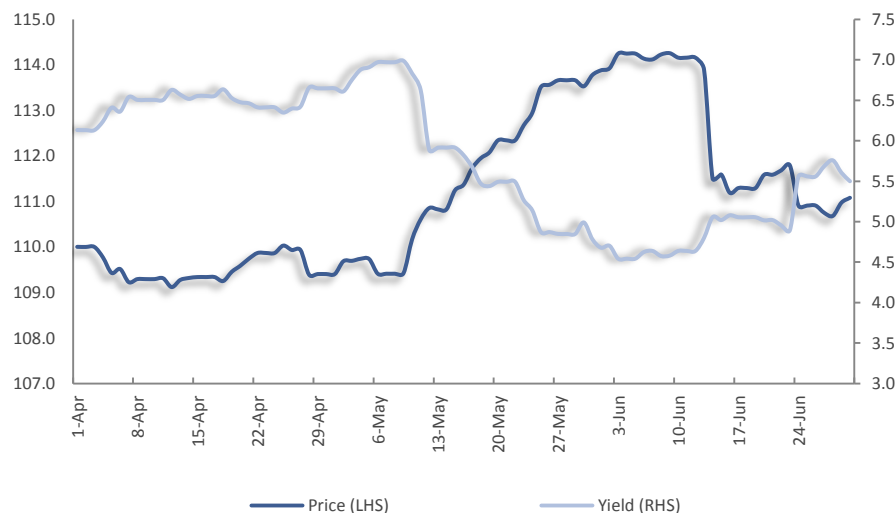
	30-June
Members	22
Market Capitalization (EUR bn.)	35.70
Weighted Average Yield	8.04
Weighted Average Coupon	3.22
Weighted Average Maturity	13.43
Weighted Average Duration	9.23

*(Returns with low frequency of occurrence have a smaller probability of being realized in the near future).

Index Composition– June 2016

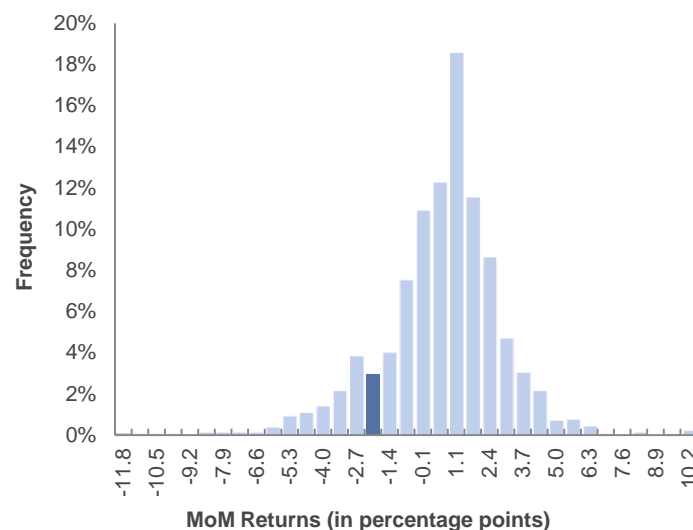
Name	Issue Amount (€ bn)	Amount Outstanding (€ bn)	Currency	Coupon	Coupon Type	Coupon Frequency	Next Coupon Payment	Issuance Date	Maturity	Credit Rating (Standard & Poor's)	Last Price – 30 June	Yield - 30 June
Hellenic Republic Government Bond	2.97	1.79	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	24/02/2012	24/02/2023	B-	74.7	8.6
Hellenic Republic Government Bond	2.97	1.77	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	25/02/2012	24/02/2024	B-	73.0	8.4
Hellenic Republic Government Bond	2.97	1.74	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	26/02/2012	24/02/2025	B-	71.4	8.3
Hellenic Republic Government Bond	2.97	1.50	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	27/02/2012	24/02/2026	B-	70.3	8.2
Hellenic Republic Government Bond	2.97	1.47	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	28/02/2012	24/02/2027	B-	68.5	8.2
Hellenic Republic Government Bond	3.17	1.53	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	29/02/2012	24/02/2028	B-	67.1	8.2
Hellenic Republic Government Bond	3.17	1.50	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	01/03/2012	24/02/2029	B-	66.1	8.1
Hellenic Republic Government Bond	3.17	1.44	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	02/03/2012	24/02/2030	B-	65.1	8.1
Hellenic Republic Government Bond	3.17	1.37	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	03/03/2012	24/02/2031	B-	64.5	8.0
Hellenic Republic Government Bond	3.17	1.37	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	04/03/2012	24/02/2032	B-	63.7	7.9
Hellenic Republic Government Bond	3.17	1.45	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	05/03/2012	24/02/2033	B-	62.8	7.9
Hellenic Republic Government Bond	3.17	1.41	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	06/03/2012	24/02/2034	B-	62.0	7.9
Hellenic Republic Government Bond	3.17	1.44	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	07/03/2012	24/02/2035	B-	61.2	7.9
Hellenic Republic Government Bond	3.17	1.51	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	08/03/2012	24/02/2036	B-	60.7	7.8
Hellenic Republic Government Bond	3.17	1.40	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	09/03/2012	24/02/2037	B-	60.3	7.8
Hellenic Republic Government Bond	3.17	1.38	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	10/03/2012	24/02/2038	B-	59.9	7.7
Hellenic Republic Government Bond	3.17	1.34	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	11/03/2012	24/02/2039	B-	59.8	7.7
Hellenic Republic Government Bond	3.17	1.37	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	12/03/2012	24/02/2040	B-	59.7	7.6
Hellenic Republic Government Bond	3.17	1.36	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	13/03/2012	24/02/2041	B-	59.7	7.5
Hellenic Republic Government Bond	3.17	1.43	€	3.000	Κλιμακωτό	Ετήσια	24/02/17	14/03/2012	24/02/2042	B-	59.9	7.5
Hellenic Republic Government Bond	4.03	4.03	€	4.750	Σταθερό	Ετήσια	17/04/17	10/04/2014	17/04/2019	B-	90.1	8.9
Hellenic Republic Government Bond	2.09	2.09	€	3.375	Σταθερό	Ετήσια	17/07/16	10/07/2014	17/07/2017	B-	96.3	7.2

Index Evolution June 2016 (Base Date : 02/01/13=100)



- The lowest price in June for the index was 110.68 while the highest price was 114.26.
- The value of the Greek Corporate Bond Index on June 30th had decreased by 2.16% compared to the previous month. Moreover, the index's average (MoM) return in the same month was 1.02%.
- From the analysis of historical data we observe that the index MoM return at the end of June was higher than 11% of realized past returns. Returns, lower or equal to the level of -2.16% were observed on average 3 days during a month.

MoM Return Histogram



	30-June
Members	17
Market Capitalization (EUR bn)	6.86
Weighted Average Yield	5.55
Weighted Average Coupon	5.06
Weighted Average Maturity	3.23
Weighted Average Duration	2.89

*(Returns with low frequency of occurrence have a smaller probability of being realized in the near future).

Index Composition– June 2016

Company Name	Issue Amount (€ bn)	Amount Outstanding (€ bn)	Currency	Coupon	Coupon Type	Coupon Frequency	Next Coupon Payment	Issuance Date	Maturity	Credit Rating (Standard & Poor's)	Last Price – 30 June	Yield - 30 June
COCA-COLA HBC FINANCE BV	800.00	800.00	€	2.375	Σταθερός	Ετήσια	18/06/16	06/10/2013	06/18/2020	BBB+	107.14	0.43
OTE PLC	700.00	650.00	€	7.875	Σταθερός	Εξαμηνιαία	07/08/16	01/29/2013	02/07/2018	B+	106.84	3.43
HELLENIC PETROLEUM FINAN	500.00	500.00	€	8.000	Σταθερός	Εξαμηνιαία	10/11/16	04/29/2013	05/10/2017		102.14	5.38
INTRALOT FINANCE LUXEMBU	325.00	325.00	€	9.750	Σταθερός	Εξαμηνιαία	15/08/16	08/01/2013	08/15/2018	B	104.92	5.14
FRIGOGLASS FINANCE BV	250.00	250.00	€	8.250	Σταθερός	Εξαμηνιαία	15/11/16	05/13/2013	05/15/2018	CCC+	62.49	38.10
COCA-COLA HBC FINANCE BV	600.00	385.38	€	4.250	Σταθερός	Ετήσια	16/11/16	11/09/2009	11/16/2016	BBB+	101.60	-0.07
TITAN GLOBAL FINANCE PLC	200.00	197.00	€	8.750	Σταθερός	Εξαμηνιαία	19/07/16	12/17/2012	01/19/2017	BB	104.07	1.18
PPC FINANCE PLC*	500.00	500.00	€	5.500	Σταθερός	Εξαμηνιαία	01/11/16	04/30/2014	05/01/2019	CCC-	81.35	13.67
PPC FINANCE PLC*	200.00	200.00	€	4.750	Σταθερός	Εξαμηνιαία	01/11/16	04/30/2014	05/01/2017	CCC-	94.04	12.56
INTRALOT CAPITAL LUX*	250.00	250.00	€	6.000	Σταθερός	Εξαμηνιαία	15/11/16	04/30/2014	05/15/2021	B	91.93	8.04
MOTOR OIL FINANCE PLC*	350.00	350.00	€	5.125	Σταθερός	Εξαμηνιαία	15/11/16	05/15/2014	05/15/2019		102.13	3.93
TITAN GLOBAL FINANCE PLC*	300.00	287.17	€	4.250	Σταθερός	Εξαμηνιαία	10/07/16	07/03/2014	07/10/2019	BB	102.27	3.45
HELLENIC PETROLEUM FINANCE*	325.00	325.00	€	5.250	Σταθερός	Εξαμηνιαία	04/07/16	06/25/2014	07/04/2019		98.28	5.89
OTE PLC*	700.00	700.00	€	3.500	Σταθερός	Ετήσια	09/07/16	07/07/2014	07/09/2020	B+	98.43	3.93
OTE PLC**	350.00	350.00	€	4.375	Σταθερός	Ετήσια	02/12/16	02/12/15	02/12/19	B+	101.40	3.92
COCA-COLA HBC FINANCE BV***	600.00	600.00	€	1.875	Σταθερός	Ετήσια	11/11/16	10/03/16	11/11/24	BBB	105.07	1.23
TITAN GLOBAL FINANCE PLC	300.00	300.00	€	3.500	Σταθερός	Εξαμηνιαία	17/12/16	17/06/16	17/06/21	BB	100.16	3.46

* 2014 Issues

** 2015 Issues

*** 2016 Issues

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