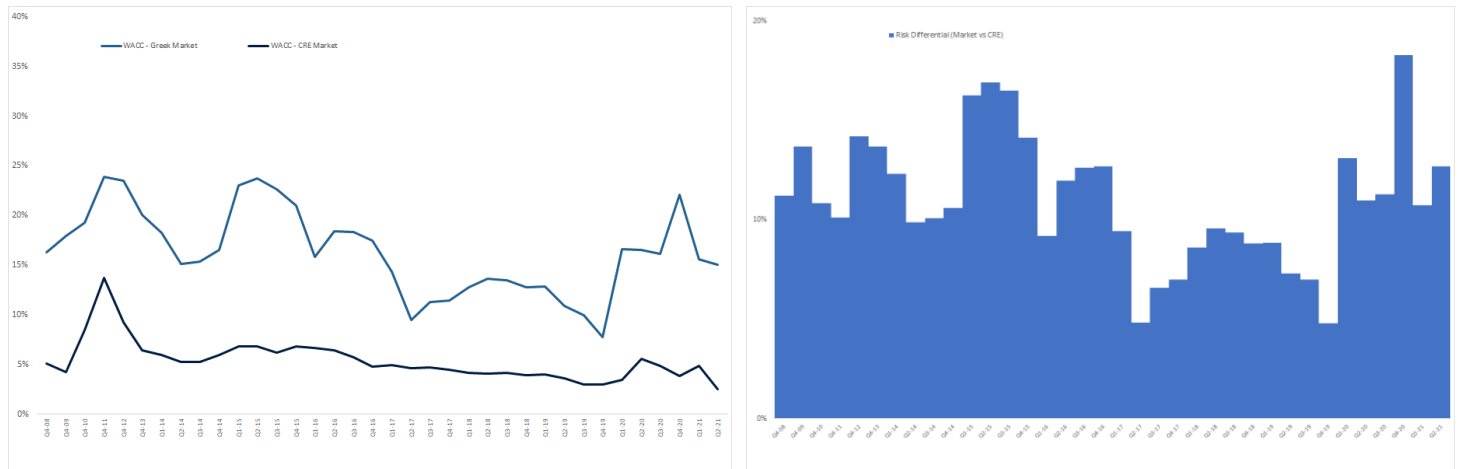


# Inventio Market Indexes – H1 2021

## Overview

Inventio computes and assesses the Weighted Average Cost of Capital in Greece both in terms of the broader Market as well as for Collateralized Real Estate. In addition, Inventio computes an **Economic Expectations Index** and a **Real Estate Value Index** for a closer monitoring of changes in economic sentiment and expectations and the corresponding changes in the value of assets.

## WACC - Greek Market & Collateralized Real Estate (CRE)



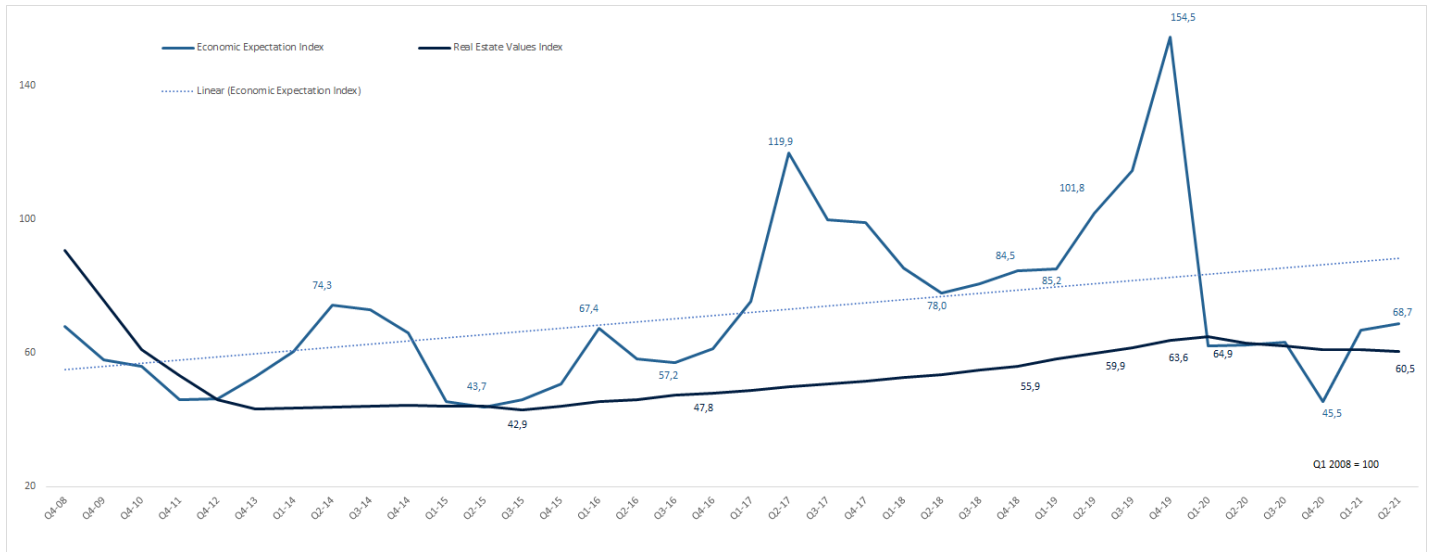
**WACC - Greek Market:** 2020 was expected to be the year of considerable growth for the Greek economy with the Greek 10-year bond yield at its historical lows, the Athens stock exchange outperforming world indices and investment activity increasing. As a result, further loosening of the Market WACC was forecasted. And so it started happening at the beginning of 2020 but the Covid-19 pandemic eruption and the ensuing market turmoil on a global level had a negative effect on the Greek Economy whereas Market WACC increased from 7,8% in Q4 2019 to 22,1% by the end of 2020.

Effectiveness of vaccination program as well as the economic support programs initiated by Greek government led to a partial correction of the Market WACC in Q1 2021 while a slightly decreasing trend formed in Q2 2021. The Greek economy Market WACC is expected to loosen in the next quarters as the Greek 10year bond still remains to historical lows, the Athens Stock exchange is recovering, and the Greek economy rebounds gradually in 2021.

**WACC – CRE Market:** As expected, the reaction of the Real Estate market was smoother, but it is still too soon to predict the real impact of COVID-19 over the Greek real estate markets. **So far, the divergence of behavior between Market and CRE WACC is more than evident and from a usual spread of circa 5-10% we are now to 12,6% despite the loosening of the Market WACC in H1 2021.** The shrinking of investment activity and the pressure of the lock down primarily to the retail and to a degree to the office sectors had an initial mild negative effect the duration and magnitude of which will be determined as usual with a lag of 2-3 quarters.

Yield compression will pick up again in the long term due to the great prospects of the market and the gradual recovery of the Greek economy.

## Economic Expectation Index & Real Estate Values Index

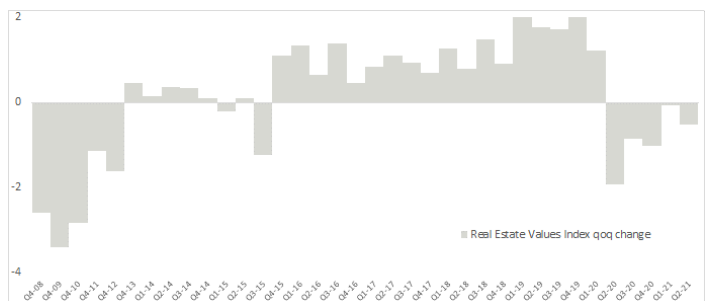
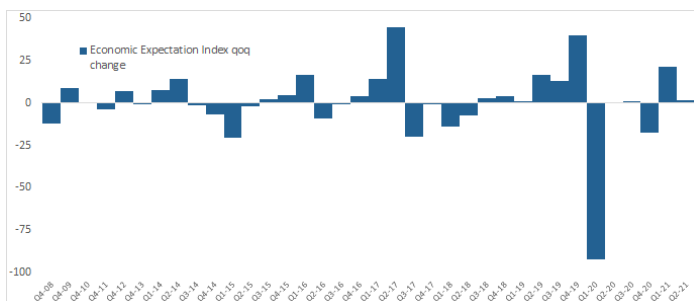


### Economic Expectations Index- EEI: According to our analysis:

1. The positive momentum of the Greek Economy has boosted Economic Expectations Index to its historical high at the end of 2019.
2. As the Index captures changes in sentiment, it is particularly sensitive to unexpected events and exhibits increased variance. The sudden spread of covid-19 pandemic and the lock down of the economy (locally and globally) in late Q1-2020 forced the Index to a sharp fall by Q2-2020., thereon remaining stable as most of the stakeholders got to a wait and see mode. The Government's precautionary measures to limit the spread of the virus and the Support Funds helped to mitigate some of the negative effect.
3. The resurgence of the pandemic drove to a further drop of the index in Q4 2020.
4. The vaccination progress and the anticipation that the Coronavirus pandemic will be controlled soon despite the ongoing restrictions boosted the reaction of the Index in Q1 2021.
5. The trend, even at a slower pace, continued in Q2 2021 as the opening of the tourism season was a positive sign of returning to social and economic normality.

### Real Estate Value Index- REVI: the index reflects Real Estate Values (base of 100- Q1 2008)

1. The increased investment activity for prime income producing assets supported the market's upward trend during Q1 2020.
2. The general economic uncertainty driven by pandemic to the office and retail markets stopped further improvement in sentiment but the development of new Grade A supply in each sector which is much needed after 15 years of construction stagnation has helped in the Index showing resilience and shall further help acceleration once the pandemic is behind us.
3. As of H1 2021, Real Estate Value Index is still c. 40% lower from its 2008 peak value.



## Calendar

Period	Macro Events	Economy WACC	EEI	RE WACC	REVI	
2008 Q3 2009	Financing Issues – Beginning of the crisis	↑	Initial flight to quality	↓	Uncertainty pick up ↔ Stable ↘	Downward trend
Q4 2009 Q2 2010	Elections	↘	Slight Correction ↗	↘	dead cat bounce ↔ Stable ↘	Downward trend acceleration
Q3 2010 Q1 2012	First Program	↗	Stoppage of investments	↘	Negative expectations persist ↗ Risk Increase ↘	Downward trend
Q2 2012	Failed Election	↑	Historical Top- Default status	↓	Negativity bottoms out ↗ Historical Top ↘	Downward trend decelerates
Q3 2012 Q3 2014	Elections – Signing of new agreement	↘	Economic climate improvement	↗	Expectations improve with ups and downs ↘ Slight derisking ↘	Historical Low (Q3 '13)
Q4 2014 Q2 2015	Elections – near GREXIT	↑	A new reversal to security	↓	Reemergence of uncertainty ↗ Trend reversal ↔	Stable
Q3 2015 Q2 2017	Elections – Signing of new agreement	↘	A new derisking cycle	↗	Positive expectations build up ↘ Long Term derisking ↗	A slight upward momentum
Q3 2017 Q2 2018	Moderate growth – Investors hesitancy	↗	Uncertainty looms	↘	Realization time- adjustment of Expectations ↘ derisking continues ↗	Slight Increase
Q3 2018 Q1 2019	End of memorandums – Long pre-election period	↔	Stable/ Slight decrease	↗	Wait and see attitude ↘ derisking continues ↗	Slight Increase
Q2 2019	EU Elections – Announcement for National Elections in July	↘	Economic climate improvement	↗	Positive International and domestic expectations ↘ De-risking continues ↗	Slight Increase
Q3 2019 Q4 2019	Elections – Positive momentum in international and domestic markets	↘	Positive momentum in international and domestic markets	↗	Positive International and domestic expectations ↘ De-risking continues – Increasing demand ↘	Increasing demand – upward momentum
Q1 2020 Q2 2020	Spread of Covid-19	↑	Uncertainty looms - External factor	↓	Reemergence of uncertainty – External factor ↗ Trend reversal ↔ ↘	Stable/ Smooth decline
Q3 2020 Q4 2020	Second wave of Covid-19	↗	Uncertainty looms again	↓	Reinforcement of uncertainty ↔ Normalization ↔ ↘	Stable/ Smooth decline
Q1 2021 Q2 2021	End of Lockdown – Vaccination program on progress	↘	Market Correction	↗	Wait and see attitude ↘ Wait and see attitude ↔	Stable

## Methodology

### 1. Calculation of WACC

The general formula for WACC:  $WACC = (E/V) * \text{Cost of Equity} + (D/V) * \text{Cost of Debt}$ , whereas

E = Market Value of the firm's equity

D = Market value of the firm's debt

$V = E + D$

$E/V = 40\%$ ,  $D/V = 60\%$

Cost of Equity = Risk Free Rate of Return + Beta \* Market rate of return

Risk Free Rate of Return = 10-year Greek Bond Yield

Beta = Europe Beta Market according to Damodaran/ Europe Real Estate Beta Market according to Damodaran

Market Rate of Return = 12m volatility of Athens Stock Exchange /Average Real Estate Values volatility

Cost of Debt = Interest Rate \* (1 – Tax rate)

Interest Rate = Non-Financial Corporation Loans over an amount of €1m, non collateralized/ for RE with collateral and/or guarantees

Tax Rate = Effective Corporate Tax Rate at the time

### 2. Economic Expectation Index

Considering the 10-year Greek bond yield, the Greek Corporate tax rate, Loan Interest rates and volatility of Athens Stock Exchange, Inventio creates an index which measures the expectations that prevail for the course of the Economy. Q1 2008 = 100

### 3. Real Estate Values Index:

Analysis of the historical real estate yields and rents in the main real estate markets (retail, industrial and office) for calculating the weighted average value of an indicative asset. Q1 2008 = 100

Sources: Elstat, Eurostat, Bank of Greece, Athens Exchange Group (Hexel), Damodaran Online

#### Disclaimer:

This documentation is issued for information purposes only. Information contained herein has been obtained from sources believed to be reliable but have not been independently verified. There is no guarantee, representation or warranty provided and no responsibility or liability accepted as to the accuracy of the information or its completeness. Expressions of opinion herein are subject to change without notice. The contents of this presentation relate to potential investment considerations that may involve substantial risks, such as the risk to lose part of or all the investment, the absence of a regular market and illiquidity. This document is not and should not be construed as an offer to sell or solicitation of an offer to purchase or subscribe to any investment or service. The prior written consent of Inventio Consulting is required before this report can be reproduced/ distributed or otherwise referred to in whole or in part.

Inventio Consulting, All Rights Reserved.