## 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)
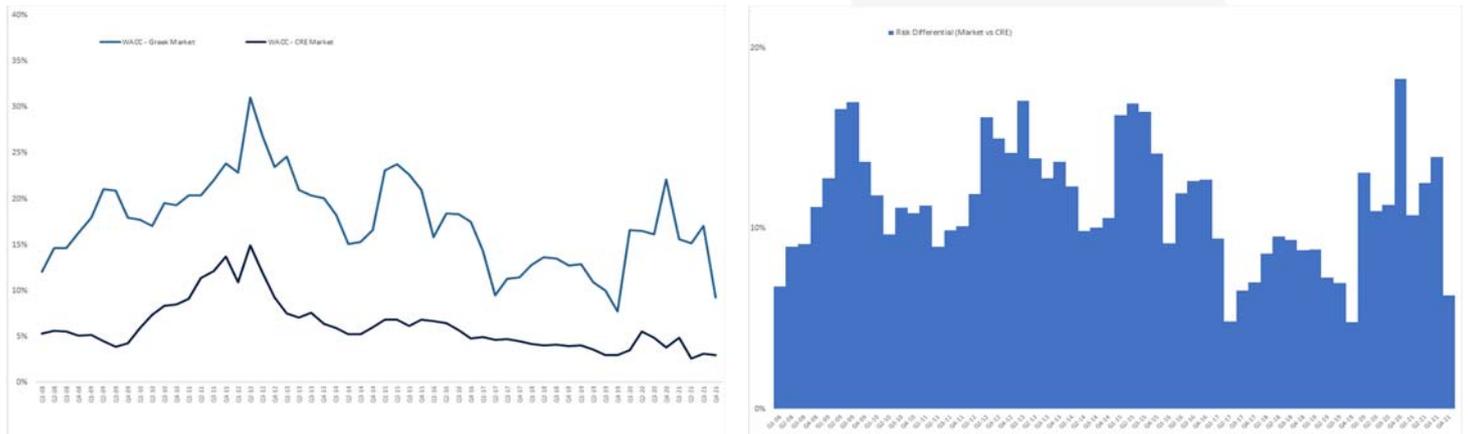
WACC - Greek Market: The Greek economy Market WACC has further loosen in H2 2021 as the Greek 10year bond remains to historical lows, the Athens Stock exchange is recovering, and the Greek economy rebounds strongly. WACC almost fully recovered to the 2019 levels, where the Covid-19 pandemic eruption and the ensuing market turmoil on a global level had a negative effect on it. The effect of the 3rd wave of Covid-19 (emergence of Omicron) during the last month of 2021 is not yet recorded but expected to be negligible to modest.

WACC – CRE Market:. The investment activity is picking up again but the real effect of covid-19 primarily to the retail and to a degree to the office sectors (remote work) will be determined with a lag of minimum 2-3 quarters.

Yield compression will pick up again in the long term due to the improving prospects of the market.

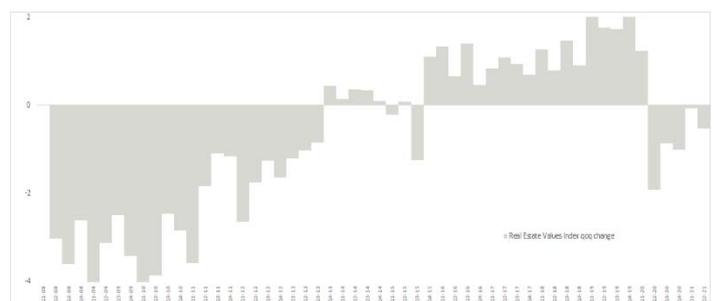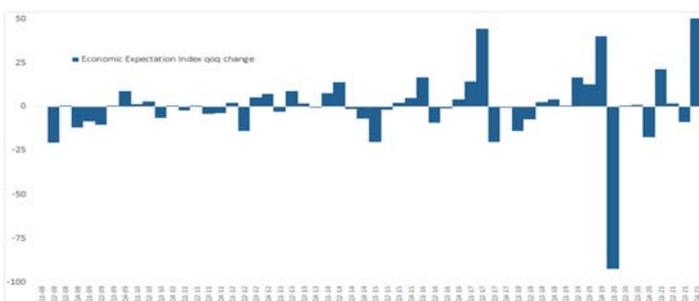## Economic Expectation Index & Real Estate Values Index

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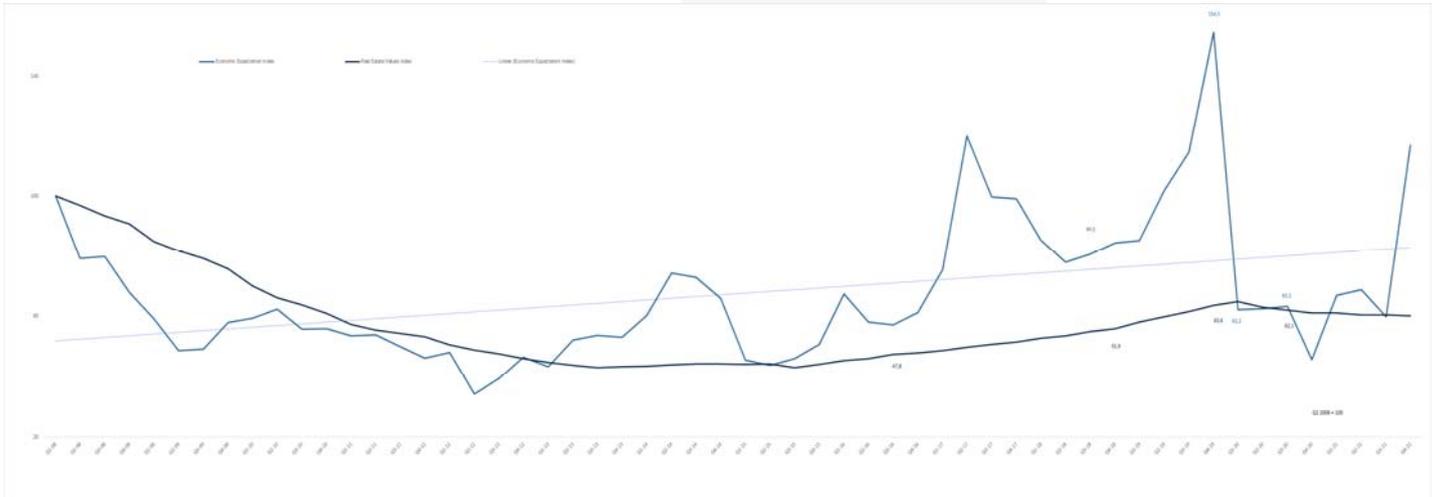
Economic Expectations Index- EEI

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.

3. Thereon remaining almost stable with small variances according to the progress of the pandemic as most of the stakeholders got to a wait and see mode. The Government's precautionary measures to limit the spread of the virus, the vaccination progress and the Support Funds helped to mitigate some of the negative effect.

4. The anticipation that the Coronavirus pandemic will be controlled soon despite the ongoing restrictions, a positive sign of returning to social and economic normality and the rebound of the Greek economy boosted the reaction of the Index in H2 2021.

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 H2 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
Q3 2021 Q4 2021	Return to normalization despite spread of Omicron	↘	Market Correction/ normalization	↗	Positive expectations build up	↔	Normalization	↔ Stable

Methodology

1. Calculation of WACC

The general formula for WACC: WACC = (E/V) * Cost of Equity + (D/V) * 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 collaterilized/ 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 (Helex), Damodaran Online