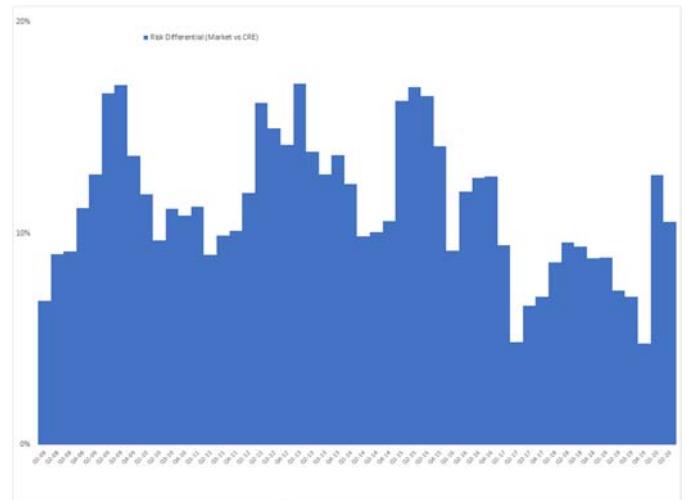
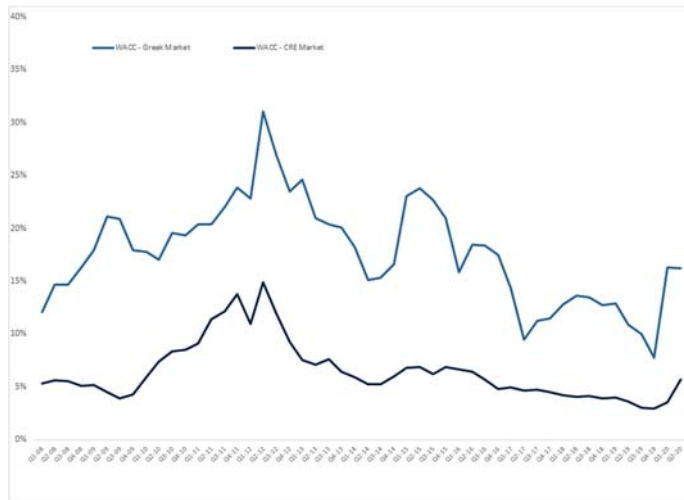


Inventio Market Indexes | Q2 2020

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 expecting to be the year of revival for the Greek economy. The Greek 10year bond yield was at its historical lows, the Athens stock exchange outperformed, and the investment activity was increasing both from local and international investors. A further loosening of the Market WACC was expected.

Despite that the beginning of the year was according the expectations, the turmoil in international markets due to the spread of Covid-19 and the lockdown of the Greek Economy from late March drove to an intense increase of the Market WACC in Q1 2020.

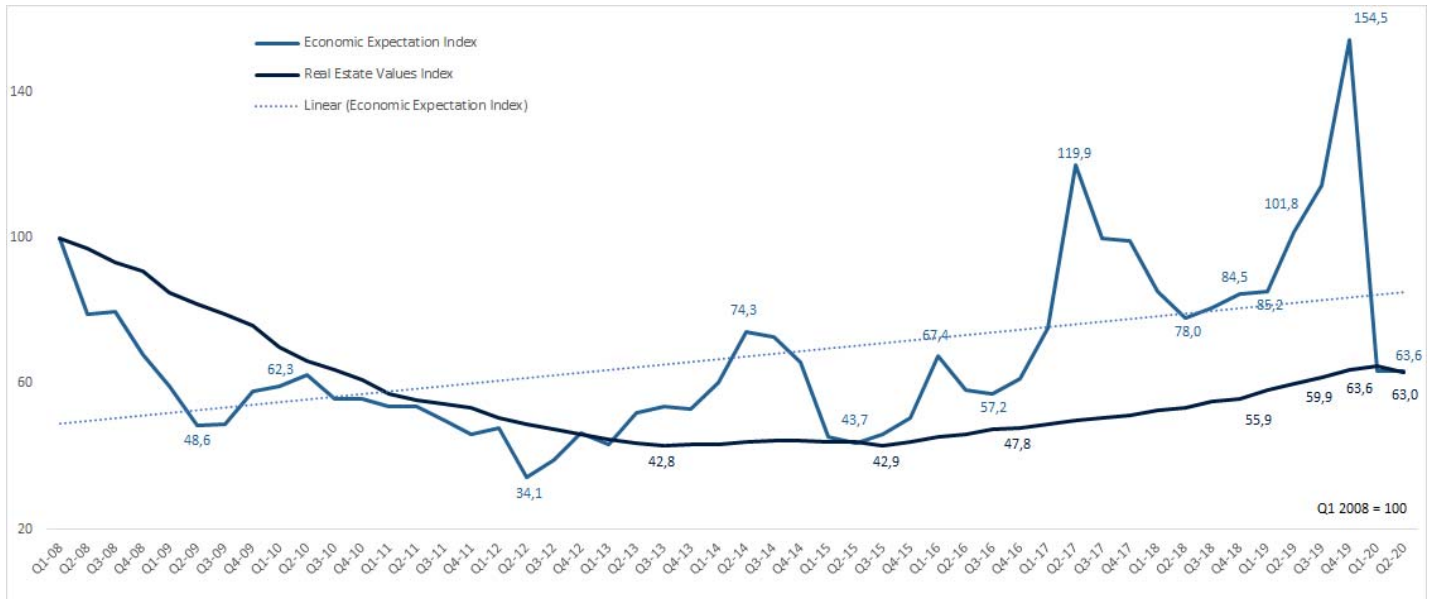
Greece has timely taken all the necessary measures that effectively controlled the spread of Covid-19 in the country, allowing the end of the lockdown from May and the partially reopening of its borders to international visitors from June. Additionally, the Greek 10year bond yield dropped again at its pre- pandemic level after fluctuating higher during March and April while Athens stock exchange is trying to recover from the severe drop of March. Due to these actions the Market WACC remained stable during Q2 2020 and not further increased.

As the Greek economy will be hit hard (heavy dependency on tourism and international trade), the evolution of the Market WACC is highly depending on the reaction of the local and international investors as well as the support of the Greek Economy by the Government. As the pandemic continues, all the projections are being revised negatively.

WACC - CRE Market: As expected the reaction of the Real Estate market was smoother and slower but it is still too soon to predict the real impact of COVID-19 in the Greek real estate markets especially since many opposing forces form the expectations. The CRE WACC increased during the H1 2020 mainly due the shrinking of investment activity and the pressure of the lock down mostly for the office and retail markets. The upward trend is expecting to continue in the next quarter as investors hold a wait and see approach.

The excess liquidity and the security of the real estate provides a cushion to the excess and extreme volatility of the financial markets. Combined with the low rates of central banks and that Greek real estate market still offers opportunities that yield above average returns compared to other European countries, the end result will be the softening of the CRE WACC in the mid-term.

Economic Expectation Index & Real Estate Values Index

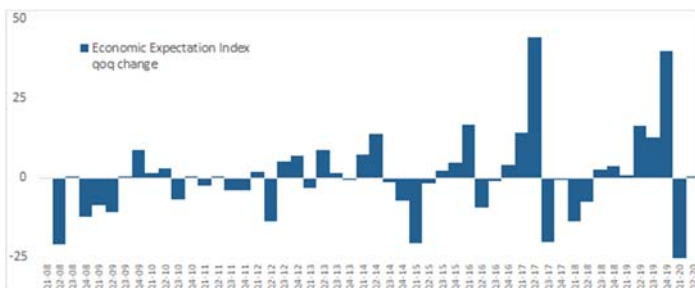


Economic Expectations Index- EEI: According to our analysis:

1. The positive momentum of the Greek Economy has boosted the Economic Expectations Index to its historical high in the end of 2019 and the future prospect was promising.
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) for an unknown period, forced the Economic Expectation Index to a sharp fall in Q1 2020.
3. During Q2 2020 the index remained stable as it is mainly a period of stand by and digesting the real aspects of the situation.
4. The recession is expected to deepen in Q3 2020, so any resistance of the Index is depending on the economic policy interventions at National and European level and how they will be implemented in practice.

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

1. The growing demand for yielding investments and the high returns that the market is offering compared to other European countries support the market's upward trend despite that lack of prime assets until Q1 2020.
2. During Q2 2020, the Index recorded a smooth decline mainly as a reaction to general economic uncertainty from covid-19.
3. Greek economy will be hit hard again. The weaker internal demand and the significantly restrain activity of many Greek enterprises may put extra pressure to real estate rental rates especially for the office and retail market. The reaction of local and foreign investors for investing in the Greek real estate market will play the most important role for reversing the further drop of the Real estate values.
4. The development of new Grade A supply in each sector which is much needed after 15 years of construction stagnation will drive an acceleration of the values in the long term.
5. In Q2 2020, the Real Estate Value Index has gained c. 50% from its bottom, but it 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	↗	Trends 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	↗	Trends reversal	↔ ↘	Stable/ Smooth decline

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

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